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THE BUILDER

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THIS WEEK'S NEWS

THE NEXT BATCH of licences for rebuilding in Central London will be to the value of £7 m. (of which £5¼ m. will go to the City), and will be issued about Easter, the Ministry of Works has announced. This and other details of plans for rebuilding in London are given on p. 3

THE ADVANTAGES of having a single organisation similar to the British Medical Association, to act for all architects and for architects only, are set out by a correspondent on p. 4

THE RIBA COUNCIL have recently approved a number of recommendations of the Practice Committee in regard to an overall revision of the RIBA Scale of Professional Charges. The revised conditions and scale are set out on p. 7

THE QUEEN, on the recommendation of the Royal Institute of British Architects, has awarded the Royal Gold Medal for Architecture for 1954 *to the Australian architect, Mr. Arthur George Stephenson, CMG, MC, FRIBA, AMTPI.* p. 8

THAT, UP TO DATE, planning has been very little other than a drag upon the efficiency of industry and an almost unmitigated nuisance was the view expressed by Mr. P. A. Macrory in a recent paper at the Town Planning Institute. From now on, however, the speaker added, planning and its essential component, industrial development, had a chance, but only if it was realised that the planner could not succeed without industry. p. 17

THE FIRST of a series of articles on the duties and functions of the Clerk of Works appears on p. 19

MR. WILFRED HORSFALL, President, NFBTE, in a Christmas message to Regional Federations, has pointed out that the granting of the operatives' demand for a 9*d. an hour wage increase would add £90 m. to the industry's annual wages bill, and £90 to the price of a house.* p. 20

RIBA SCALE OF CHARGES

THE RIBA Scale of Charges has been in existence for a very long time, and has been the subject of frequent amendment and addition. The inevitable result of such a process is that there should enter into it a certain untidiness and lack of consistency, and one of the main purposes of the redrafting which has now taken place, and which is published for members' comment, has been to put it into proper and consistent form. It can be said at once that this purpose has been largely fulfilled, and that the new draft* is a more consistent document than its predecessors.

One of the few considerable amendments is that which raises the minimum charge for principal's time from seven guineas a day to one and a half guineas an hour. This is now at a more realistic level, and represents an adjustment long overdue. In the same clause, however, are added time charges for assistants, which seem to require some definition for "Senior" and "Junior" status to become properly consistent. Salaries vary widely between office and office, and it would seem better to have left these charges for members to assess themselves as related to the actual value to themselves which the time of a particular assistant represents. Failing that, the charges should surely be related in some way to the actual salaries paid.

The vexed question of fees for consultants and their effect upon the remuneration of the architect receives only minor attention; this is a subject which has been a matter of discontent in the profession for a long time, and it was to be hoped that some more drastic amendment might have arisen on this occasion. The whole essence of a scale of fees is that it should achieve rough justice in as precise a manner as possible, and that the public should pay fairly for what they require.

The work of an architect contains much co-ordinating of the work of others, and the employment of a specialist does not relieve him of this element, but, more often than not, renders it the more necessary. It is, perhaps, no exaggeration to say that the presence of consultants upon a job adds to the work of the architect rather than relieves it, however valuable in a technical sense their services may be. Consultants should not, therefore, be regarded as individuals who supply services and knowledge which ought to be supplied by the architect himself, but as people who can contribute to the efficiency of the complex mechanics of the modern building, adding something outside and extra to the services for which an architect is engaged.

There are, of course, instances where the employment of a consultant does, in fact, reduce the labours of the architect, and in such cases it is right and proper that this fact should be reflected in the fees claimable by the architect. But these cases are exceptional and should not govern the rule.

There is much to be said for leaving this matter largely to the general clause which refers this matter to agreement between architect and client, adding, perhaps, a general principle that where the employment of a consultant relieves the architect of a part of his normal work, an agreed reduction in fees should be made, commensurate with the circumstances of each case.

Some members, particularly those of the older school, are not at all happy about the scales dealing with "non-architectural" work which remain in the new draft. It is well known that some architects, particularly in the provinces, act as their own quantity surveyors, valuers and even as agents in the buying and selling of property where they hold appointments as surveyors to landed estates. There is nothing improper in their doing so, but there is much to be said for the contention that when they do so they act as members of another profession which has its own system of self-government within which those concerned can secure their own protection and regulation. If this applies, there would be no need for such matters to be dealt with in the RIBA Scale at all, and the latter would then become a more compact and consistent document related more clearly to the main functions of the Institute, namely architecture. The Institute holds no qualifying examinations in quantity surveying, land surveying, valuing or estate agency, and it is indeed a moot point whether it should profess to govern these activities without having established any standard of competence. If there is any general feeling in the profession upon these matters, now would be the time to deal with it.

Criticisms of the draft scale are thus likely to be directed more to what might have been left out than to what might be added, and we feel that in no case will such criticisms promote any heated discussion. This is a tribute to the work of the committee which undertook the task.

* See page 7.

NOMINATED SUB-CONTRACTORS

THE decision of the High Court in the recent case* of *Helical Bar and Engineering Co.* v. *Liquidator of Tout and Finch, Ltd., and others*, may have some very important consequences for the building industry as a whole. It certainly gives to the nominated sub-contractor under the RIBA standard form of contract a much better legal status than he has hitherto been thought to possess. From that improved status a number of developments may or may not arise according to the spirit in which the various sections of the building industry (including the sub-contractors themselves) face the new situation.

Many of the difficulties of the sub-contractor's position arise from the fact that his contractual relationship is with the main contractor alone; he has no contractual relationship with the building owner. The fact that he is nominated by the building owner does not affect the legal position. It is from the main contractor that he must derive payment, and, if he finds it necessary to take legal action to enforce his rights, his only remedy lies against the main contractor. If conditions in the building industry were ideal, the dependence of the sub-contractor on the main contractor would not greatly matter. In fact, of course, conditions are not ideal—the bankruptcy rate amongst building contractors is sufficiently high to make the matter one of very serious concern. To some extent the worst rigours of the common law position have been mitigated by special provisions in building contracts. Thus clause 21 (*c*) of the RIBA standard form provides:

> " Before any certificate is issued to the Contractor, he shall, if requested by the Architect, furnish to him reasonable proof that all nominated Sub-contractors' accounts included in previous certificates have been duly discharged, in default whereof the Employer may pay such accounts upon a certificate of the Architect and deduct the amount so paid from any sums otherwise payable to the Contractor."

A similar provision is contained in condition 40 (5) of CCC/Works /1. Again clause 11 (*h*) of the RIBA standard form of sub-contract provides that the main contractor's interest in any retention money held by the employer on account of sub-contract work is fiduciary as trustee for the sub-contractor; this provision applies whether the sub-contractor has, or has not, been nominated.

Clause 21 (*c*) of the RIBA standard form is open to the possible criticism that it is purely within the architect's discretion whether or not he should give a certificate for direct payment; moreover, the wording of the clause is such as to suggest that, even if the architect does give a certificate, the employer is not obliged to make direct payment to the sub-contractor. If the architect does not give a certificate, or if the employer decides not to pay direct, there is apparently nothing which the sub-contractor can do about it. This criticism apart, however, it might have been thought that clause 21 (*c*) gave the nominated sub-contractor almost as much protection as he could reasonably require. It has been generally held, however, that these provisions for direct payment did not apply if the main contractor had presented his petition in bankruptcy. Naturally, liquidators have been anxious to get in all available assets, but this view of the law has been generally accepted throughout the industry. The result has been that sub-contractors have tended not to press for direct payment where the result would have been to bankrupt the main contractor, leaving the sub-contractor as an unsecured creditor.

The decision in the *Helical Bar and Engineering Co.* case establishes that the provisions for direct payment in clause 21 (*c*) do apply where the contractor has presented his petition in bankruptcy; it was also held that clause 11 (*h*) of the form of sub-contract applies in these circumstances.

It will be obvious that this decision greatly enhances the position of the nominated sub-contractor. The employer, provided his architect gives the necessary certificate, will now be able to pay the nominated sub-contractor direct even though the main contractor has presented his petition in bankruptcy. Moreover, the sub-contractor need no longer be afraid that, if he presses the employer for direct payment, the main contractor may be driven into bankruptcy. The architect, on the other hand, will need to consider the interests of all parties. The bankruptcy of the main contractor may be a serious inconvenience to the building owner who wishes to get the works completed, and the interests of the building owner and sub-contractor may now tend to clash in a way that was not likely to occur when it was equally to the sub-contractor's interest to keep the main contractor going. To resolve such possible clashes of interests will require high qualities of judgment on the part of the architect, but it may be confidently expected that architects will rise to the occasion.

It can thus be assumed that the nominated sub-contractor will henceforth be in a much more secure position than hitherto, and it will be interesting to see how far this new security is reflected in lower prices for sub-contract work. Since the work of nominated sub-contractors often amounts to something like two-thirds of the value of a sizeable contract, it is obvious that even a slight reduction in sub-contracting prices would have a material effect; if the sub-contractors can see their way to such a reduction, it would be a very welcome move.

This new status of the nominated sub-contractor should also provide a new and sounder foundation for relations between builders and sub-contractors. The Federation of Associations of Specialists and Sub-contractors are known to have been greatly disappointed at the results of their recent approach to the Joint Contracts Tribunal for amendments to clause 21 of the RIBA Standard Form. In the new circumstances created by the *Helical Bar and Engineering Co.* decision, both sides can afford to take a more generous view of each other's problems. If the amendment of the RIBA Form can be approached in this spirit, it will indeed be an augury of a happy New Year for the building industry.

* *The Builder*, December 18, 1953, p. 976

BATTERSEA PARK

THE grave deficiency of public open space in London is universally acknowledged by all who have examined the problem, and the London County Council and its spokesmen have been foremost in proclaiming the need for increasing the area devoted to this purpose in drawing up plans for redevelopment. In the face of these protestations the LCC's decision to rob the public—and shorn of verbiage this is what the decision means—of access to several acres of public open space in Battersea Park for 21 years by entrusting the running of the Festival Gardens for this period to a new company formed by Sir Leslie Joseph and Mr. Charles Forte is all the more strange, and will be widely deplored.

Few had any real objection to the temporary sacrifice of part of Battersea Park to accommodate the Festival Gardens during the Festival of Britain, and subsequently, while the enterprise was supported by public funds, the continuation of the Fun Fair at least had the appearance of something of a public service. After 1951, however, the public showed fairly plainly that they did not really want the Fun Fair, and as attendance continued to fall off, efforts to keep it going appeared to be more and more of an attempt to revive a dead horse by flogging it, and the LCC's continued attachment to the project the more inexplicable. Under the new set-up all pretence that this Fun Fair is different from any other must be dropped. If there is a place for commercial entertainment of this type in London then let the promoters find their own site, or if not, why not hand over Hyde Park for dirt-track racing, St. James's Park for a commercial ice-rink (modern engineers could surely manage to keep the lakes permanently frozen), and build point blocks in the pleasant setting of Regent's Park? Many will feel that no breach in the line of defence of public open spaces in this overcrowded country is permissible, however " desirable " the project.

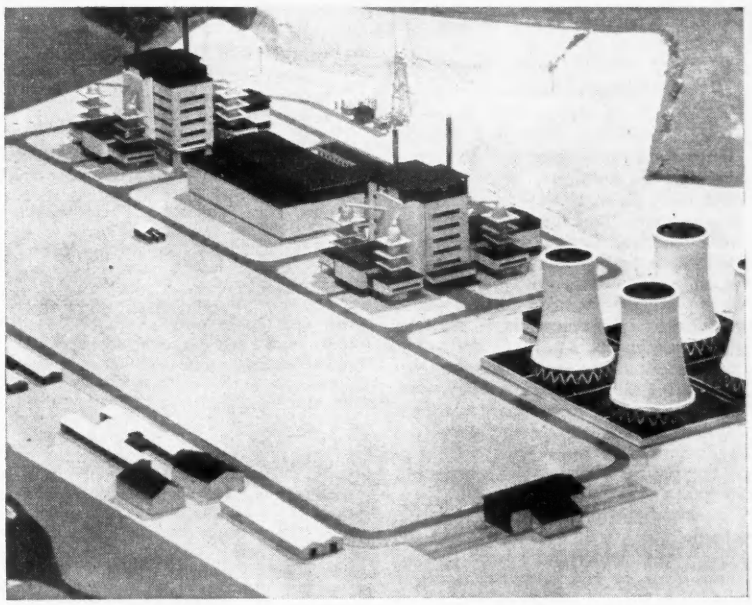
NOTES & NEWS

REBUILDING IN LONDON

THE second step in the Government's policy of attaining the maximum monthly expenditure on commercial and office buildings in Central London which can be met by the building industry without damaging other programmes, will be the issue of a further batch of licences to the value of £7m., of which £5¼m. will go to the City, the Ministry of Works has announced. The licences, it is understood, are likely to be issued about Easter. Other instalments will follow, and a steady build-up of work in progress should result.

The Ministry has also stated that during 1953, as the first step in this policy, licences were issued for commercial office buildings in Central London to the value of £13m., of which £7m. were in the City.

It is expected that the main task of rebuilding the City will be completed by the late 1950s, and an idea of the acceleration that can be expected in the programme is seen in a comparison of the present rate of expenditure on new buildings there of £100,000 a month and that of £1m. a month which the Ministry of Works envisages will be spent from 1955 onwards, "when the pipeline is filled." The total cost of real projects in the City known to the Ministry is in the region of £45m., including those of £12¼m. for which licences were issued in 1953, and all this work should be licensed in the next two or three years, and completed in the next five or six years.



HARNESSING ATOMIC ENERGY.—An "air view" of a model of the British Experimental Power Station which will employ thermal reactors and is being constructed at Calder Hall, Cumberland. The model shows the turbine house in the centre, with its attached administrative control and workshop block. On each side are the two reactors, in which heat is generated in graphite-moderated uranium piles. The heat is transferred by gas to the four vertical boilers seen around each reactor. Fans are provided to circulate the gas. They are situated in the low wings on each side of the reactor. The steam passes to the turbine house where it drives four turbo-alternator sets. The building construction work is under the direction of Sir Charles Mole, OBE, MVO, FRIBA, Director General of Works, Ministry of Works. The contractors for the new power station are Messrs. Taylor Woodrow Construction, Ltd.

RIBA PRIZES CRITICISM

ON THE INVITATION of the President of the RIBA, Mr. Raymond Erith, FRIBA, has undertaken to give the criticism of the drawings submitted in competition for the RIBA Prizes and Studentships, 1954–1955. Mr. Erith's criticism will be delivered at a general meeting of the Institute to be held in February, 1955.

AA CARNIVAL

THOSE MEMBERS of the profession who look forward to the annual carnival of the Architectural Association as a means of relieving their suppressed feelings after the year's hard labours were not disappointed by the function held at Bedford-square on December 18. As usual, there were a whole host of pleasant diversions with which to while away the small hours, not the least of which was the dancing. Music was provided by Tommy Kinsman and his band, together with several rhythm and jazz groups, and notable among these were the West African Rhythm Brothers whose torrid blues blended feelingly with the atmosphere prevailing at 4 a.m.

The selection of entertainments available for those whose energies flagged, and understandably so, included a number of films as well as two excellent cabarets. These were well attended by the guests, and it was obvious that the audiences appreciated the more subtle points of the shows. Altogether, one came away feeling that an extremely full and enjoyable night had been passed, and if the programme's request that no alcohol be brought into the building was observed, it was equally ensured that none was taken out!

MOW CHANGES

SIR ERIC DE NORMANN, KBE, CB, Deputy Secretary, Ministry of Works, will shortly retire from the public service. With the Prime Minister's approval Mr. Edward F. Muir, CB, now Deputy Secretary, Ministry of Materials, will be appointed as his successor.

CHIEF ARCHITECT'S POST

WILLESDEN BOROUGH COUNCIL invite applications for the post of Chief Architect on the permanent staff of the Borough Engineer and Surveyor's Department. Salary £1,050 per annum rising to a maximum of £1,250. Details advertised elsewhere in this issue.

On the 12.10 *p.m.*

O CRITICS! in our hours of ease,
Polemical and hard to please,
You seem omniscient, set apart—
The pundits of creative art!
But, for the welfare of your souls,
May I suggest a change of rôles?
Create, I beg, a work or two
And let us have a shot at you!

SPERO.

COMING EVENTS

FRIDAY, JANUARY 1

RIBA.—Travelling exhibition "Homes and Surroundings." Stuart Hall, Norwich. Until January 16.

MONDAY, JANUARY 4

RICS.—"Mining Subsidence," by Mr. Kenneth Wardell, FRICS. 12, Great George-street, SW1. 5.30 p.m.

TUESDAY, JANUARY 5

RIBA.—Announcement of Award of Prizes and Studentships and a talk by Mr. John Betjeman on "Honour Your Forebears." 66, Portland-pl., W1. 6 p.m.

THURSDAY, JANUARY 7

INSTITUTION OF SANITARY ENGINEERS.—Induction of the president, Mr. E. H. Vick, MICE. Caxton Hall, Westminster, SW1. 5.30 p.m.

FRIDAY, JANUARY 8

RIBA.—Exhibition of premiated designs in University of Sheffield competition 66, Portland-place, W1. Continuing until January 20. (Mondays-Fridays, 10–7; Saturdays, 10–5.)

BIRMINGHAM AND FIVE COUNTIES AA.—"Architecture—The Changing Scene," by Mr. A. G. Sheppard Fidler, FRIBA, AMTPI. Royal Birmingham Society of Artists' Galleries, New-street. 6 p.m.

SATURDAY, JANUARY 9

MODULAR SOCIETY.—Inspection of a Day Nursery at Eastbury-road, Watford. 11 a.m.

FROM "THE BUILDER" OF 1853

Saturday, December 31, 1853

ROYAL HAYMARKET THEATRE.—Mr. W. Callcott has painted some exceedingly good scenery for Mr. Buckstone's pantomime, "Harlequin and the Three Bears," especially a "Ruined Abbey," where the moon illuminates the broken tracery of a window, and which changes to the Lotus Lake and waterfalls. This is a very clever work indeed; the waterfalls and distance are capitally managed. The last scene of the introduction, called in the bill a Fairy Raft, introduces a brilliant mass of colour, but it wants gradation; the contrasts are too violent.

CORRESPONDENCE

ARCHITECTS' SALARIES

To the Editor of *The Builder*

SIR,—I feel sure that, whilst many of your architect readers will deplore the wrangle now going on in your correspondence columns, where three Societies each claim the credit of raising the salaries of architects employed by the National Coal Board, they will be pleased to have their attention drawn to this matter so that they can compare the architectural profession with the medical profession, where only one Society acts for the doctors, i.e., the BMA.

Your readers might then ask themselves why architects should not have an organisation similar to the BMA to act for *all* architects and architects only (the three Societies in question also represent many members who are not architects).

If a British Architectural Association were formed, it might well prove that the several societies which have been formed of recent years to look after the interests of particular groups of architects would be disbanded, as problems of salary and status would then be dealt with by this larger and more powerful body, whilst their other activities could well be managed by sub-committees of the RIBA.

This new Association would, of course work in collaboration with the RIBA, which would then revert to its original purpose—that of a learned Society.

SIDNEY H. LOWETH
[FSA, FRIBA].

Westways, Bearsted, Kent.

THE SPECIALIST TRADES

To the Editor of *The Builder*

SIR,—The question is constantly being raised of the number of P.C. items appearing in bills of quantities, and architects are being repeatedly asked to have the work measured so that the contractor can handle the various items which have come to be recognised as specialist trades. I must say I am all for it, especially if it encourages the contractor to do more of the building work than he does now. It would certainly mean very much less work in the architect's office as it would not be necessary for him to get in competitive prices from various specialist firms to insert in the bill as he does at the moment.

The architect would have to specify very fully what he requires and would call upon the contractor to produce samples of articles and workmanship to comply with these requirements. No names of firms would be given. The architect would then not be dealing with any of the sub-contracting firms; in fact he would not even know whether or not work was being sub-contracted. There would be no necessity for site meetings except with the contractor, as he would not be dealing with the sub-contracting firms but only with the contractor. The specialist firms would no longer look to the architect for an opportunity to tender as their contacts would be solely with the contractor. It would not be necessary for the quantity surveyor to certify any payments due to the sub-contractors as they would not exist in the bill.

It would be interesting to look into some of the sub-trades which now often become PC items in the contract, and which are not now generally done by the contractor.

PLASTERING: This is measured.

PLUMBING AND HOT WATER: This would be measured and the fittings carefully specified.

SANITARY FITTINGS: These would be specified and samples called for.

PAINTING: The standard finish, number of coats, etc., would be specified, but no proprietary brands named.

HEATING: Requirements would be specified, and the contractor would be required to produce a scheme to the architect.

LOCKS AND FURNITURE: A detailed specification would be given, and samples up to this specification would be called for.

JOINERY: The usual detailed drawings now made by the architect would be supplied, and a sample of work of the various items would be submitted for approval within the specification and drawings.

METAL WINDOWS: These would be left to the contractor to select.

CONCRETE WORK: Floors, staircases, whether precast or *in-situ* would be left to the contractor to deal with.

STEEL FRAME OR RC CONSTRUCTION: This may be done by a consulting engineer, and a measured bill would be supplied, but the firm executing the work would be in the hands of the contractor, and the erection would be under the supervision of the engineer, as at present.

FLOOR FINISHES: These would be measured in the usual way, but no competitive price per yard would be given in the bill.

ASPHALTING, SCREEDING TO ROOFS, ETC.: This would be measured as at present, but no names of firms would be specified.

ORNAMENTAL IRONWORK: The usual drawings would be supplied by the architect, and prices obtained by the contractor.

FIREPLACES AND SURROUNDS: Ditto.

TILING, ROOF AND WALL—ORNAMENTAL OR PLAIN: Measured and specified, but no price per yard given.

WATER SUPPLY, GAS MAINS, ELECTRIC MAINS, SEWER AND OTHER CONNECTIONS: All dealt with direct by the contractor with the various undertakings.

To mention a few more items which are usually dealt with by the architect but would be left to the contractor:

LIFTS.
LETTERING.
FIRE ESCAPES.
STONEWORK.
GARDEN WORK.
PLAYGROUNDS AND EQUIPMENT.
FIRE MAINS.
PAVING—ORNAMENTAL OR PLAIN.

Considering the amount of work involved in getting in prices as judged by what is now done in the architect's office, it would mean considerably more work to be undertaken at the initial stage of tendering by each contractor, but it would enable him to arrange his own terms and prices.

I think it is true to say that the architect has become attached to certain firms of sub-contractors, just as he has with contractors who he knows will give him a satisfactory job, and the tendency has been to employ certain firms over again. The contractor may equally become attached to certain firms who do his work well.

If this system of omitting PC's from the bill were generally adopted it might mean keener competition, although I doubt it, for it would not follow that the contractor would be able to get a cheaper price as work would still have to comply with a standard and therefore it might only mean that work involved in getting in prices would be transferred from the architect to the contractor.

"—and at 8 o'clock you said you'd give up smoking and wage claims in 1954!"

If, however, the contractor carried out more of the work himself as he did in the past, then the whole question of sub-contractors would be simplified, but experience shows that the tendency is for the contractor to do less and less work through his own organisation and to sub-let more and more work to individual firms; and in consequence of this the building industry has become divided into sections very much as it was when separate contracts were made, instructions given direct and final accounts settled with each separate trade.

How far specialist firms have come to look to architects for their source of work it is difficult to say. There certainly has grown up a liaison which is often personal and individual between architects and sub-contractors, but it may be that the architect is taking too much responsibility and not leaving sufficient to the contractor. Of course, there might be two sides to this question and it would be interesting to have the views of the sub-contracting firms who so far have remained silent.

ARTHUR W. KENYON [CBE, FRIBA]
15, Adeline-place, Bedford-sq., WC1.

STANDARD DRAFT-BILL OF QUANTITIES

To the Editor of *The Builder*

SIR,—The compilation of the experimental standard draft-bill of quantities described in the article in your issue of December 18 must have been an interesting task. A good many surveyors have probably made the experiment in one form or another in the past, and most have abandoned it except in a modified

way in certain well-defined types of repetitive work.

There is a danger nowadays of everybody becoming too "standard-minded," thereby losing individuality, and a good bill of quantities is a very individual thing. Like a good suit of clothes it is essential that it should be "made to measure," and not just taken "off the peg" and altered up to fit the building which it covers.

Before the quantity surveyor ever puts pen to paper he must consider how his bill will present the job to the estimator; all parts must be in due proportion and balance, and the emphasis must be in the right place. These qualities are difficult to define but easily recognisable in any bill possessing them; they are quite distinct from the accuracy and precision implicit in every bill of quantities, but it is in their introduction that the judgment and experience of the quantity surveyor find their fullest play. It is open to doubt whether bills written on a standard draft would be likely generally to achieve these ends.

The writer of the article claims that time would be saved in abstracting and billing; this might sometimes be so, but there would be a tendency for the worker-up to make the job fit the standard draft-bill, instead of making the bill fit the job. It is most undesirable that young surveyors engaged in working-up —or indeed anybody else for that matter— should ever be led to suppose that the production of a good bill of quantities is merely a matter of filling up just one more form. There is much more in it than that.

E. E. Roper [FRICS].
20, Dudley-road, Tunbridge Wells.

COST-OF-LIVING AND WAGES

To the Editor of *The Builder*

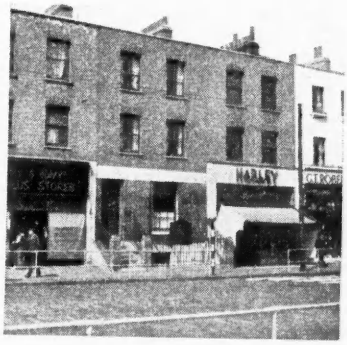
SIR,—Mr. Ronald Wates' address to the Institute of Quantity Surveyors reported in your issue of December 11 may confuse the large numbers of apprentices and building trade workers now reading your newspaper, and your omission of a report of any discussion following his address, doubtless for reasons of space, may give a misleading picture of the perspicacity of quantity surveyors.

I am afraid that Mr. Wates must have confused percentages with index figures. It is incorrect to state that with the 1939 index of the cost of living as 100 the present cost-of-living index is 164, thus making out that the cost of living has only increased in 14 years 1.64 times, or by two-thirds. Your readers know better than this! On a comparison of indices and at a conservative figure, the present index is 264; the correct multiplier for 1939 prices to reach current values is therefore 2.64 times, or, fractionally, two and two-thirds.

The cost-of-living index is the *average* of an aggregate of prices and costs. Some items are below the average while others —building is one—are above. The RICS has given the figure of 293 per cent. as the increased cost of building over that of 1939. For those unfamiliar with percentages, this is nearly *four* times; not three times.

Mr. Wates based his remarks on the false premise that there has been an increase in real costs. The fact is that since 1939, there has been a marked change in the value of money. An oblique effect of this so-called inflation has been greatly to write down the internal war debt. It is the unwillingness of many to see the obvious that

(*continued on page* 6.)

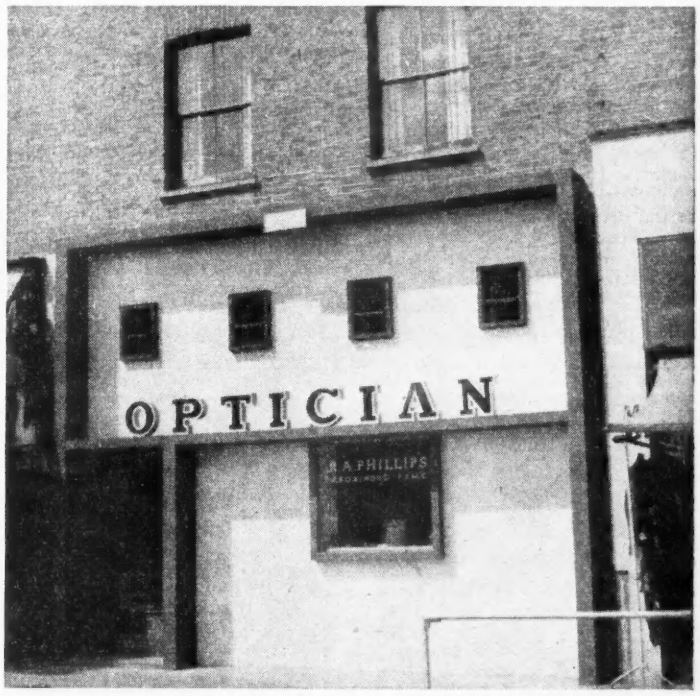


This view, taken before the alterations were carried out, shows the offending steps to pavement level.

ALTERATIONS AT 237, EAST INDIA DOCK ROAD, POPLAR

Architect
J. GODFREY-GILBERT, ARIBA

Builders
S. LUXTON & SON, LTD.



The premises after alterations.

ONE of the requirements of this scheme of alterations for an ophthalmic optician's surgery was that the ground floor should be lowered to pavement level. The flight of stone steps by which access was originally gained to the ground floor was a source of danger to patients who had drops in their eyes. The new frontage also attracts more attention than did the existing one. The interior of the premises were also replanned to provide an up-to-date layout.

The work had to be carefully planned because the client could not close down for more than a week. A detailed building programme was worked out with the contractor and was rigidly adhered to. The new floor was installed before the old one was removed and the large precast concrete frame to the front elevation was delivered and fixed early one Sunday morning with the aid of a mobile crane. The basement was filled in with hardcore.

bedevils, for instance, wage negotiations.

I suggest that the costs of all trades in the building industry, with the exception of carpenter, are the same as in 1939, allowing for the change in the value of money. Carpenter shows an increase of 50 per cent. (or half as much again) over 1939, partly as a legacy of the redundancy of 1941 and 1942 (remember the "Designated Craftsmen"?) and the unfortunate policy of importing timber from the western seaboard of Canada.

It is interesting to note that wages at the beginning of the war, in 1939, were 1s. 11½d., and that they are now only 3s 6½d. This is an increase of 75 per cent. (or three-quarters as much again). Using index figures with 1939 as 100, wages are now 175. Perhaps one should query the effect of bonuses and the resulting confusion of real cost.

The BRS second report on the Productivity of Housebuilding gives the key to the puzzle of building costs: Supervision (foremanship) and site organisation (management).

C. R. VINYCOMB.

54, Wickstead-avenue,
Leagrave, Luton, Beds.

RESPONSIBILITY FOR DEFECTS

To the Editor of *The Builder*

SIR,—I have read the report (your issue of December 11) of the judge at Bow County Court who held that a decorator employed by a householder at an hourly rate was still responsible for defects due to bad workmanship.

This raises an interesting and entertaining thought. Can a builder hold his workmen similarly responsible, and should he make the necessary deductions weekly from the pay packets, or hold 10 per cent. retention for the duration of the workmen's "Defects Liability Period"?

CYRIL WHITEHEAD.

81, Dale-street, Liverpool 2.

BOOKS

*** *Books reviewed in these columns may be obtained on application to the Book Dept., "The Builder," 4, Catherine-street, Aldwych, WC2. Cash (which should include 1s. to cover postage and packing) should accompany the order.*

BOULLEE'S TREATISE ON ARCHITECTURE, transcribed from the original MS in the Bibliothèque Nationale and edited by Helen Rosenauer. Pp. ix, 131. Illustrated. (London: Alec Tiranti, Ltd.) Price 21s.

THE NAME of Etienne-Louis Boullée (1728-99) is hardly a household word in England; but it was (literally) brought into the limelight by Professor Pevsner in his scholarly paper on Schinkel at the RIBA in December, 1951, when Boullée's influence upon George Dance the Younger was explained. Just a year previously, in another important paper, Mr. Summerson had dealt with the influence of Dance's work on Soane's genius; so that Boullée's share in the evolution of our own architecture is clear. As Professor Pevsner said, Boullée was one of a group of French architects "of varying achievements, but all of them revolutionaries of pure form, men who believed in austerity rather than elegance . . . . The whole group all represents one style, which is, broadly speaking, the Dance style."

Boullée became a teacher at the Ecole des Ponts et Chaussées at the early age of 18 or 19, a member of the Academy of Architecture in 1762, and Professor at the Ecoles Centrales in 1795. He had an extensive practice in Paris. He is chiefly remembered, however, as a "visionary draughtsman," who produced a large number of highly imaginative, monumental, costly, and frequently quite impracticable projects in the grand manner. Many of these are illustrated and described in Dr. Rosenauer's learned book, which bristles with footnotes and references; but the chief item in her volume is the transcript, diligently edited, of the original manuscript of his *Architecture: Essai sur l'Art*.

This was compiled c.1789-1799, while the Revolution was interfering with his ordinary practice, and was never completed or published. It expounds his philosophy of architectural design, in which, as Dr. Rosenauer comments, "ordered immensity appeals to him."

Beginning with an attempt to define "architecture," he proceeds to argue that architecture involves a study of Nature, and then he develops this thesis from an examination of various types of building. He concludes with some notes on the teaching of architecture. Throughout the *Essai*, there are references to Vitruvius and the practice of the ancients.

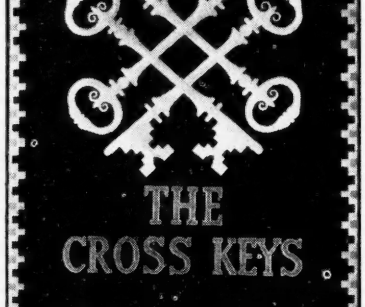
M. S. B.

HILL AND REDMAN'S LAW OF LANDLORD AND TENANT. SECOND CUMULATIVE SUPPLEMENT TO THE ELEVENTH EDITION. By W. J. Williams and Miss M. M. Wells, Barristers - at - Law. (London: Butterworth and Co.) Pp. xx 93. Price 10s. 6d. (Main work and supplement together 87s. 6d.)

THE ELEVENTH EDITION of Hill and Redman's standard work on the law of landlord and tenant was published in 1951, and was followed by a supplement in the following year. This second supplement, replacing the earlier one, contains the relevant Acts, regulations and High Court decisions between the publication of the main work and September 1, 1953. Division I of the Supplement takes the form of a "noter-up" in which the effect of new legislation and decisions is noted against the appropriate page in the text of the main work. Division II sets out the text of the Acts and regulations with annotations.

The note on the important case of *Marcroft Wagons v. Smith*, on page B1, seems to be based on some remarks of one of the Lords Justices who heard the case in the Court of Appeal, rather than on what the case actually decided. The learned editors have, however, achieved a high standard which should fully maintain the reputation of this standard work. The supplement is indispensable to any one who already owns the main volume.

A. E. T.



INN SIGNS.—The design on the left by Miss B. E. Smout was awarded first prize in an art competition for students at West Midland Art Schools. The other design was submitted by Mr. R. Keeling. The competition was organised by Messrs. Mitchells and Butlers, the Birmingham brewers.

BOOKS RECEIVED

BUILDING PROCEDURE. By Edgar Lucas. (Surrey: The Technical Press, Ltd.) Price 15s.

SCHOOL DESIGN AND CONSTRUCTION. By J. A. Godfrey and R. Castle Cleary. (London: Architectural Press.) Price 36s.

DAILY MAIL IDEAL HOME BOOK, 1953-4. Edited by Frances Lake. (London: Daily Mail.) Price 12s. 6d.

DECORATION AND FURNITURE. Vol. II. By Bruce Allsopp. (London: Sir Isaac Pitman and Sons, Ltd.) Price 70s.

THE NEW ARCHITECTURE IN GREAT BRITAIN. By Edward D. Mills, FRIBA. (London: The Standard Catalogue Co., Ltd.) Price 40s.

MECHANICAL VIBRATION. By G. W. Van Santen. (London: Cleaver Hume Press, Ltd.)

THE ARCHITECT'S STANDARD CATALOGUES 1954-55-56. Vols. 1, 2, 3 and 4. (London: The Standard Catalogue Co., Ltd.)

CITY OF MAN. By Christopher Tunnard. (London: Architectural Press.) Price 50s.

MUNICIPAL ENGINEERING ADMINISTRATION AND ORGANISATION. By Rodney S. Offord. (London: Contractors' Record, Ltd.) Price 25s.

ARCHITECTS' CONDITIONS OF ENGAGEMENT AND SCALE OF PROFESSIONAL CHARGES

Recommendations on Revision Approved by RIBA Council

At their meeting on December 8 last the RIBA Council approved a number of recommendations of the Practice Committee in regard to an overall revision of the RIBA Scale of Professional Charges. The booklet is in future to be entitled "Conditions of Engagement and Scale of Professional Charges" and the revised Conditions and Scale are set out below. It should be noted that the application of the surcharge on final accounts for fees not exceeding £1,150 will be discontinued from the date on which the revised Scale comes into force.

In accordance with the provisions of By-law 38, the Council give notice that the revised Conditions of Engagement and Scale of Professional Charges will be confirmed by them at their meeting on February 2, 1954, subject to the consideration of any comments or criticisms which may be received from members. Such comments or criticisms are required in accordance with the above-mentioned By-law to be submitted by January 30.

CONDITIONS OF ENGAGEMENT

1. (*a*) Members of the RIBA are governed by the Charters, by-laws and Code of Professional Conduct of the Royal Institute.

(*b*) The Architect shall give such periodical supervision and inspection as may be necessary to ensure that the works are being executed in general accordance with the contract; constant supervision does not form part of the duties undertaken by him.

(*c*) In cases where constant superintendence is required a Clerk of Works shall be employed for this purpose. He shall be nominated or approved by the Architect, and appointed and paid by the Client. He shall be under the Architect's direction and control.

(*d*) The Architect shall not make any material deviation, alteration, addition to or omission from the approved design without the knowledge and consent of the Client.

(*e*) The Architect has authority to give orders on behalf of the Client if such are necessitated by constructional emergencies, provided that the Client shall be immediately notified thereof.

(*f*) The Architect shall, if requested to do so, at the completion of the work, supply free of charge to the Client, drawings sufficient to show the main lines of drainage and other essential services. Copyright in all drawings and in the work executed from them will remain the property of the Architect.

(*g*) The following Architects' charges do not include for Surveyors' work for which see clauses 13 to 18 which are those of the Royal Institution of Chartered Surveyors adopted by the RIBA.

(*h*) The employment of Consultants shall be at the Architect's discretion in agreement with the Client and the payment of their fees shall be a matter of arrangement between Architect and Client.

Where it is agreed to retain the services of a Consultant in no case shall the Architect's fee be reduced by more than one-third on the cost of the work upon which the services of the Consultant are retained, provided always that the Architect's fee on the cost of the whole scheme shall not be reduced by more than one-sixth.

(*i*) An engagement entered into between the Architect and the Client may be terminated at any time by either party upon reasonable notice being given.

SCALE OF CHARGES

2. *New Works.* For taking the Client's instructions, preparing sketch design, making approximate estimate of cost by cubic measurement or otherwise, preparing working drawings, specification, or such particulars as may be necessary for the preparation of bills of quantities by an independent Quantity Surveyor, or for the purpose of obtaining tenders, advising on tenders and preparation of contract, nominating and instructing Consultants (if any), furnishing to the Contractor two copies of the contract drawings, specification, or other particulars and such further details as are necessary for the proper carrying out of the works, general supervision as defined in the Conditions of Engagement, issuing certificates for payment, and certifying accounts in respect of new works, exclusive of the services enumerated in Clauses 6 and 16, the charge is to be a percentage on the total cost of all executed works as follows:

(*a*) If the cost of the executed works exceeds £4,000 the percentage is 6 per cent.

(*b*) If the cost of the executed works does not exceed £4,000 the percentage is 10 per cent. in the case of works costing £200 graduated to 6 per cent. in the case of works costing £4,000.

(*c*) When work is executed wholly or in part with old materials, or where material, labour or carriage is provided by the Client, the percentage shall be calculated as if the works had been executed wholly by the Contractor supplying all labour and materials.

(*d*) In addition to a percentage on the total cost of executed works, the Architect is entitled to charge in respect of all works included in the tenders, but subsequently omitted, two-thirds of the charge which would have been payable had they been executed.

3. *Variations of Charges.* The Scale of Charges may be varied by prior written agreement between Client and Architect in respect of the following:

(*a*) *Repetitive Works.* In the case of extensive works of a simple repetitive character, the charge may be reduced by one-sixth.

(*b*) *Works to Existing Buildings.* In the case of works to existing buildings a higher percentage is chargeable, not exceeding twice the amount payable under the Scale for new works of the same cost, and depending upon the intricacy of the work involved.

(*c*) *Other Works.* In works in which designs for fittings, furniture, decorations or garden work are main features, special fees adequate to the circumstances are chargeable.

4. *Partial Services.* In cases where the Architect performs partial services for any reason, including the abandonment, deferment, substitution or omission of any project and/or works, or part thereof, or if the services of the Architect are terminated, the charges in respect of the services performed are as follows:

(*a*) For taking Client's instructions and preparing preliminary sketch plans to illustrate possibilities of a site or cost of a scheme the charge is on "quantum meruit."

(*b*) For taking Client's instructions, preparing sketch design sufficient to indicate the Architect's interpretation of the Client's instructions (but not in detail adequate to enable bills of quantities to be prepared), and making approximate estimate of cost, the charge is on "quantum meruit" and shall not exceed one-sixth of the percentage due under Clause 2 or 3 (as the case may be) on the estimated cost of such works.

(*c*) For taking Client's instructions, preparing sketch design, making approximate estimate of cost by cubic measurement or otherwise, and preparing working drawings, specification, or such particulars as may be necessary for the preparation of bills of quantities by an independent Quantity Surveyor, or for the purpose of obtaining tenders, the charge is two-thirds of the percentage due under Clause 2 or 3 (as the case may be) on the estimated cost of such works.

(*d*) If the project is abandoned during the preparation of the working drawings, the charge is two-thirds of the appropriate percentage on the estimated cost of such works less a "quantum meruit" charge for bringing the working drawings and other particulars up to the stage defined in Clause 4(*c*).

(*e*) In all cases where fees are assessed on the basis of "quantum meruit" regard must be had to all relevant factors including the time occupied and the character and intricacy of the work.

5. *Mode and Time of Payment.* The Architect is entitled to payment in stages as follows:—

(*a*) On the completion of sketch plans one-sixth of the total fees payable.

(*b*) During the preparation of working drawings and other particulars instalments consistent with the amount of work completed by the Architect.

(*c*) On completion of the said working drawings and other particulars, two-thirds of the total fees payable less the amount of any payments already received by the Architect pursuant to sub-clauses 5(*a*) and 5(*b*).

(*d*) The remaining one-third of the total fees to be paid by instalments as the building work proceeds consistent with the

value of the said building work completed from time to time.

6. *Services not included in the Scale.* Charges shall be payable in respect of any additional services involved in :—

(*a*) Advising as to the selection and suitability of sites. Negotiating as to sites or buildings, surveying sites or buildings and taking levels and making surveys, measurements and plans of existing buildings.

(*b*) Preparing drawings in addition to working drawings for the use of the Client, and drawings for and negotiating with ground landlords, adjoining owners, public authorities, licensing authorities or others.

(*c*) Preparing varied working drawings to give effect to alterations of the Client's instructions affecting matters of detail after the completion of the working drawings.

(*d*) Negotiating building or other licences, making town planning, by-law or other applications, and negotiations in connection with Party Walls, Rights of Light and other easements, reservations or restrictions.

(*e*) Litigation, arbitration or valuation.

(*f*) Changes in design or delay in building operations due to causes outside the control of the Architect.

7. *Surveys.* For making inspection, preparing reports or giving advice on the structural or sanitary condition of premises, the charge is on " quantum meruit " in accordance with Clause 4(*e*).

8. *Litigation and Arbitration.* For qualifying to give evidence, settling proofs, conferences with Solicitors and Counsel, attendance in Court or before Arbitrations or other tribunals, and for services in connection with litigation, the charge is based upon the time occupied, but is in no case to be less than 10 guineas per day.

Architects acting as Arbitrators are recommended to base their charges upon the total time occupied in dealing with a case at the rate of three guineas an hour exclusive of out-of-pocket expenses and other disbursements.

9. *Dilapidations.* For preparing schedule and settling the amount if required, the charge is five guineas per cent on the amount of the settlement, or on the estimated cost of complying with the Schedule. (Minimum fee, five guineas.)

10. *Travelling Time.* An additional charge may be made if the work should be at such a distance as to lead to an exceptional expenditure of time in travelling.

11. *Time Charges.* In cases in which charges are based upon time occupied the minimum fee is 1½ guineas per hour exclusive of charges for Assistants' time. The minimum charge per hour for a Senior Assistant's time shall be one guinea, and for a Junior Assistant's time half guinea.

12. *Expenses.* Fees, in all cases, are exclusive of the cost of appliances, extra copies of drawings and documents, lithography, travelling and hotel expenses and all other reasonable disbursements, which are to be charged in addition to fees.

NOTE: The following Clauses are in accordance with the Schedule of Professional Charges of the Royal Institution of Chartered Surveyors and are adopted by the Royal Institute of British Architects.

13. *For Approving Plans Submitted by Lessees and Inspecting Buildings during Progress.* (Clause 9 of existing scale to be revised as follows to accord with the latest issue of the RICS Schedule of Professional Charges.)

On the first	£500	2 gns. per cent.
,, next	£1,500	1½ ,, ,,
,, ,,	£18,000	1 gn. ,,
,, ,,	£80,000	½ ,, ,,
,, residue		¼ ,, ,,

(Minimum fee, 4 gns.)

Note : This scale is intended to apply to normal cases. It should be applied with discretion and may be varied in either direction to meet exceptional circumstances.

14. *The Laying Out or Development of Estates.* (As Clause 10(*a*) of existing Scale.)

15. *For Land Surveying and the Preparation of Plans and Maps.* (As Clause 10(*b*) of existing Scale.)

16. *Preparing Bills of Quantities and Valuing Work Executed.* (Clause 11 of existing Scale to be revised by the inclusion of the following paragraph under Sections I and II to accord with the latest issue of the RICS Schedule of Professional Charges.) " For adjusting variations of price under any fluctuation of price (labour and materials) clauses of the contract : 2½ per cent. upon the aggregate of the amount of the increases and/or decreases."

17. *Valuation of Freehold or Leasehold Properties.* (As Clause 12 of existing Scale.)

18. *Work under the Lands Clauses Consolidation Act or other Acts for the Compulsory Acquisition of Property.* (As Clause 13 of existing Scale.)

NOTE : Attention is drawn to the Schedule of Professional Charges issued by the Town Planning Institute which covers fees for Town Planning work.

NEW YEAR GREETINGS

WE GRATEFULLY ACKNOWLEDGE greetings from: Mr. and Mrs. James Buchanan, Mr. and Mrs. Vincent Burr, Mr. and Mrs. Oswald P. Milne, Messrs. Richards and Trollope, Mr. Kenneth Dalgleish, Mr. and Mrs. Alister G. MacDonald, Mr. and Mrs. Frederick Gibberd, Messrs. Stillman and Eastwick-Field, Mr. and Mrs. Charles Crichton, Mr. and Mrs. James Aitken, Mr. and Mrs. David Burgess, Mr. and Mrs. Whittington, Messrs. F. H. Coventry, Nigel Hannen, Donald Fraser (F. Troy and Co., Ltd.), Arthur Watts (*The Illustrated Carpenter and Builder*), Ian McCallum (*Architectural Review*), Leslie Hardern, R. H. James, A. H. Anderson, George Mansell (*Architect and Building News*), Kenneth Robinson (*Architects' Journal*), F. Woodcock (President FASS), Stuart Olson and C. W. Alston (Edmonton Builders' Exchange, Alberta), G. Wilkinson (Williams and Williams, Ltd), Denis Howard (McDonald Engineers (Kirkcaldy), Ltd.), Andrew Reid, Charles Hervey (United Steel Companies, Ltd.), R. C. Liebman, and from Messrs. Engert and Rolfe, Ltd., ITD, Ltd., and SMD Engineers, Ltd.

Royal Gold Medal for 1954

AWARD TO AUSTRALIAN ARCHITECT

THE Queen, on the recommendation of the Royal Institute of British Architects, has awarded the Royal Gold Medal for Architecture for 1954 to the Australian architect, Mr. Arthur George Stephenson, CMG, MC, FRIBA, AMTPI. This is the first occasion on which the medal has been awarded to an Australian ; it will be presented to Mr. Stephenson by the Queen during her forthcoming visit to Australia.

Mr. Stephenson was born in 1890, and was educated at the Melbourne Church of England Grammar School. He commenced his architectural training with one of the leading architects of Melbourne. Later he moved to Sydney for further experience in architectural offices and then spent some years with the British Exploration Company in New Guinea. From New Guinea he transferred to Western Australia to the Government Architect's Office. At the conclusion of the first world war he continued his training at the Architectural Association in London, working in the offices of a number of leading architects. In 1920 he returned to Melbourne and commenced private practice. While in London he became an ARIBA and an AMTPI in 1920, and in 1933 was elected FRIBA. In 1921, Mr. Stephenson founded the firm of Stephenson and Meldrum with its offices at 374, Little Collins-street, Melbourne. To keep himself informed of developments overseas in architectural work, particularly in the hospital field, Mr. Stephenson has made five extensive tours abroad.

Mr. Stephenson's works include : Stock Exchange Building of Melbourne ; Melbourne Town Hall (reinstatement after fire) ; State Savings Bank of Victoria (head office) ; E.S. and A. Bank, Melbourne (head office) ; Australian Consolidated Industries, office building, Sydney ; Royal Australian Navy Torpedo Factory ; Peek Frean's Biscuit Factory ; Sydney Lead Works ; Exhibition Building, Wellington, NZ ; Exhibition Building, New York ; Freemasons' Hospital ; Royal Newcastle Hospital ; Royal Melbourne Hospital ; Royal Prince Alfred Hospital, Sydney ; Wellington Hospital, New Zealand ; King George V Pathological Laboratories, Melbourne.

*** In view of the presentation of the medal by the Queen, the general meeting of the RIBA announced for April 6, at which the presentation was to have been made, has been cancelled.

OBITUARY

Sir Henry Berney, DL, JP, ARIBA

WE ANNOUNCE with regret the death of Sir Henry Berney, DL, JP, ARIBA. He died on Boxing Day at his home at Croydon, Surrey, at the age of 91.

Caryl A. R. Barry, ARIBA

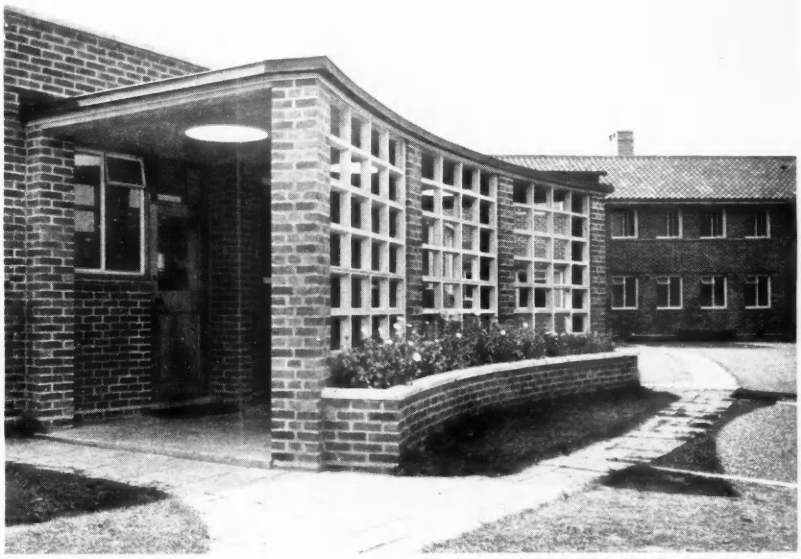
WE REGRET to record the sudden death, which took place on December 24, of Mr. Caryl Arthur Ransome Barry, ARIBA. Mr. Barry was employed in the Civil Engineer in Chief's Department of the Admiralty at Fareham, Hants. He was elected an Associate of the RIBA in 1921.

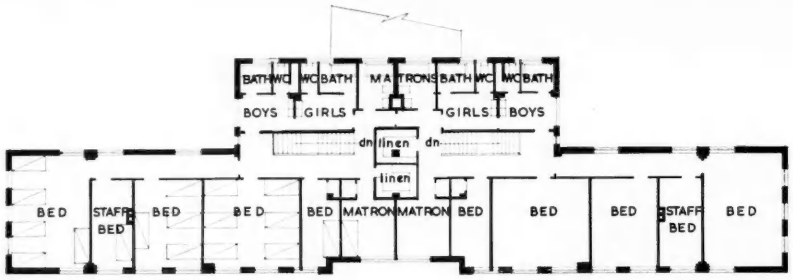
Courtyard to living block. Below: Screen to kitchen entrance.

SPURGEON'S ORPHAN HOMES, BIRCHINGTON, KENT

Architects
WOODROFFE, BUCHANAN AND COULTER

Builders
RICE AND SON, LTD.

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BOYS GIRLS GIRLS BOYS
dn linen dn
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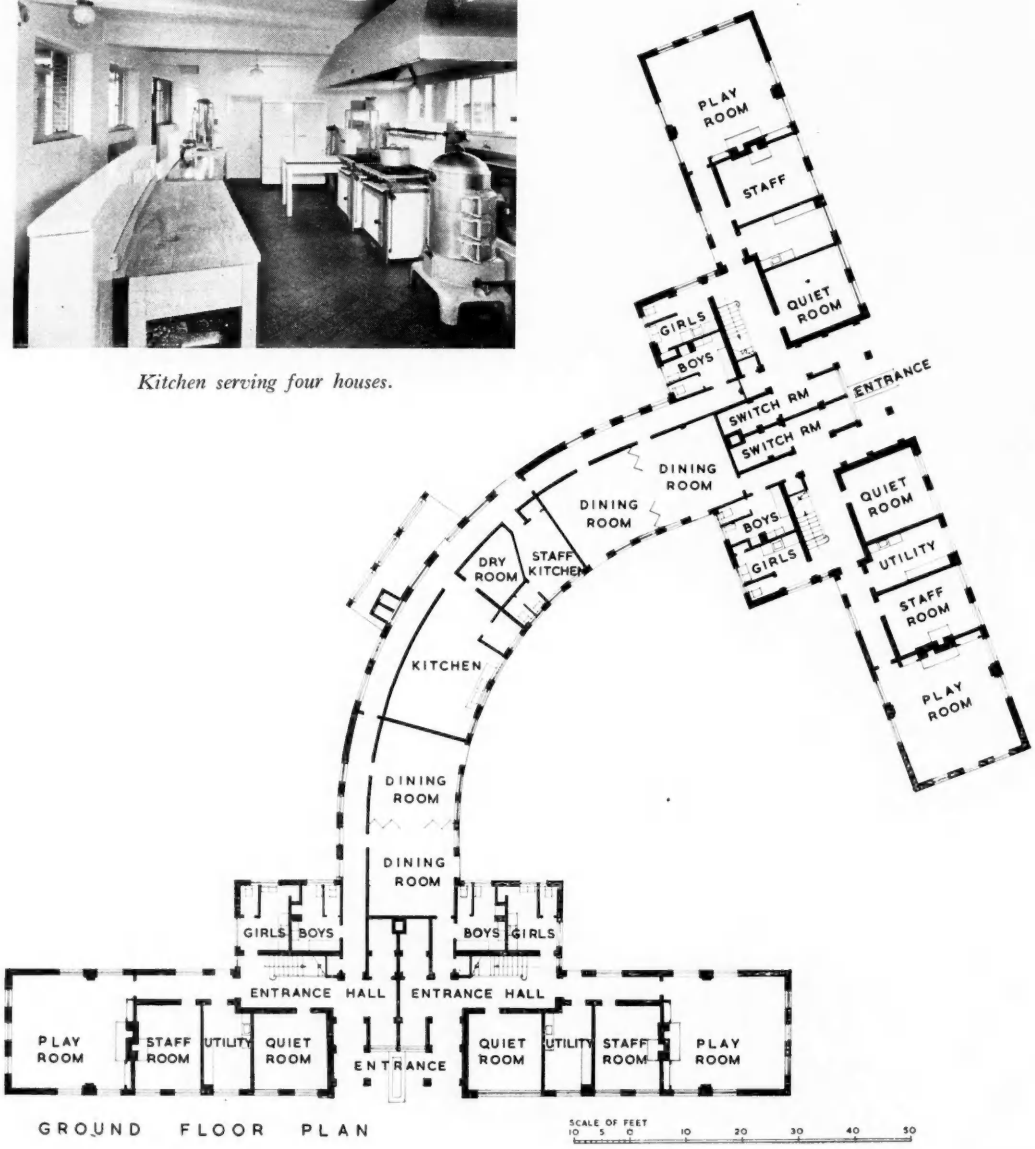
BED STAFF BED BED BED BED MATRON MATRON BED BED BED STAFF BED BED

FIRST FLOOR PLAN

Kitchen serving four houses.



GROUND FLOOR PLAN

Two separate houses, each of which accommodates 15 *children. Below: Layout.*

IN the Children's Act of 1948, which followed the Curtis Report of 1947, local authorities were required to make provision for the care of orphans in their areas. For this purpose, the local authorities were required to provide, equip and maintain homes.

The bulk of new accommodation provided to meet these requirements has been in houses accommodating eight to 10 children, usually staffed by a house mother and father.

The Children's Act also required voluntary homes for children to be registered, and empowered the Secretary of State to make regulations as to conduct of Homes and give directions limiting the number of children who may be accommodated in any one house.

The scheme illustrated has been completed by Spurgeon's Orphan Homes at Birchington at a cost of over £209,000, and is one of the first large new voluntary building projects to be completed since the passing of the Act. The new accommodation provides for 15 children in each of 12 houses and,

Pergola entrance to one of the houses.

in addition to the 180 children so housed, there are about 40 children in existing buildings.

Spurgeon's Homes were founded at Stockwell by Charles Haddon Spurgeon in 1867. The Homes were evacuated to Reigate in 1939. The first living block was commenced on the Birchington site in 1950 and occupied in 1951. The remainder of the scheme was completed early in 1953 and Reigate was then closed.

The most important planning requirements were: Each house—(1) To provide for a group of boys and/or girls not less than 10 in number; (2) To have its own dining-room; (3) the number of kitchens to be kept to a minimum.

The block plan adopted provides four house units, a central kitchen suitable for cooking for 60 children plus staff, and dining-rooms for each house. Approval was given by the Home Office to the plan accommodating 15 children per house in view of the obvious economy in the number of kitchens over a scheme using the more usual number of 10 children per house. The cost of the three living blocks was £130,000, or £725 per place.

The broad open space between living blocks and opposite buildings has been planted with beech and other trees which will in time give a feeling of enclosure to the recessed shapes of the layout. Bright colours have been used in the home.

Floors generally are thermoplastic tiles, but playroom floors are in hardwood block. The facing bricks are Sussex Wealden stocks and roofing is in antique Norfolk pattern pantiles with tapered cup tiles.

Much of the buying for the large number of children is of a bulk nature and the store building provides space for house provisions, clothing and repair room. By means of a steel portal-type roof truss, the upper floor was kept open for a width of 14.6 ft. to give additional storage space. A playroom of about 60 ft. by 25 ft. has been incorporated which can be used for children's services.

The initial problem to be faced with the heating and hot-water supply installation was that, in the final stage of the building, there would be seven blocks and if a separate boiler house were provided for each of the larger ones and two for the three smallest, six boiler houses would be required. It was decided to install a district heating scheme with Boiler House under the Sports Pavilion. The initial cost was not appreciably greater than the individual plants.

The heating is by low-pressure hot water serving radiators in the blocks and the hot water supply by calorifiers in each block. Following is a list of sub-contractors:

Heating and hot water, Rosser and Russell, Ltd.; steelwork, George Pauling, Ltd.; facing bricks, SGB (Dudley) Ltd., Sussex and Dorking Brick Co.; hollow floor tiles, Diespeker and Co., Ltd.; steel windows, Williams and Williams, Ltd.; flush doors, Leaderflush, Ltd.; electrical installation, Thompson Ritchie and Co., Ltd.; flooring, Hollis Bros., Ltd.; copper roofing, Holloway Metal Roofs, Ltd.; sanitary fittings and kitchen equipment, W. N. Froy and Sons, Ltd.; roof pantiles, Colthurst Symonds and Co., Ltd.; paint, Paripan, Ltd., Hadfields (Merton), Ltd.; gardens and sportsground, Rutherford Construction Co., Ltd.

Plans of pavilion and boiler house.

SPURGEON'S ORPHAN HOMES, BIRCHINGTON, KENT

Front elevation, showing the stores wing on the left and the laboratory wing on the right.

EDA TESTING HOUSE, LEATHERHEAD, SURREY

Architects
L. H. BUCKNELL AND RUTH ELLIS, FF/RIBA

Quantity Surveyors
WIDNELL & TROLLOPE

Builders
PRESTIGE & CO., LTD.

THE EDA Testing House was established by the British Electrical Development Association in 1947 to furnish test reports on apparatus submitted to the advisory committee on electrical appliances and accessories. The increasing scope of the work undertaken by the Testing House soon demanded more space than was available in the original premises in London, and so it was decided to erect this new building at Leatherhead. Here, manufacturers can have their appliances tested for compliance with British Standards or foreign specifications.

The building consists of two wings on the ground floor, the laboratory wing and the stores wing, with the administration accommodation, photographic and X-ray departments on the first floor. The laboratory wing contains four main rooms—the portable apparatus laboratory, large apparatus laboratory, apparatus life test room, and workshop—together with several smaller rooms providing office accommodation, battery room, chemistry laboratory, radio interference laboratory and the room associated with the temperature and humidity control plant.

The building has been planned so as to facilitate extensions if required both of the ground floor and of the upper floor.

The site slopes down from the road level, and, since a level ground floor was essential for trolleys, a considerable amount of filling was necessary; to avoid this a simple frame structure was considered by the architects, but the acute shortage of steel made its use impossible. The structure is therefore one of simple load-bearing walls, while the ground floor has suspended reinforced concrete floors over a hard-core filling. The roofs are of hollow tile covered with vermiculite plaster, which is also used on the internal surfaces of all external walls to conserve heat.

The electricity supply is taken at 415 volts, 3ph., 50c/s from the South Eastern Electricity Board's outdoor substation, which is incorporated in the design of the building behind the loading bay at the end of the stores wing. The incoming service cable terminates in the switch room, which also contains an air compressor and battery charging plant. General supplies to the laboratory wing are taken from the four a.c. busbars which are enclosed in trunking running along the wall of the corridor. The trunking is divided into two by a metal trough in which are laid the various cables carrying special supplies throughout the laboratories. In the lower half of the trunking are the gas, air and water mains.

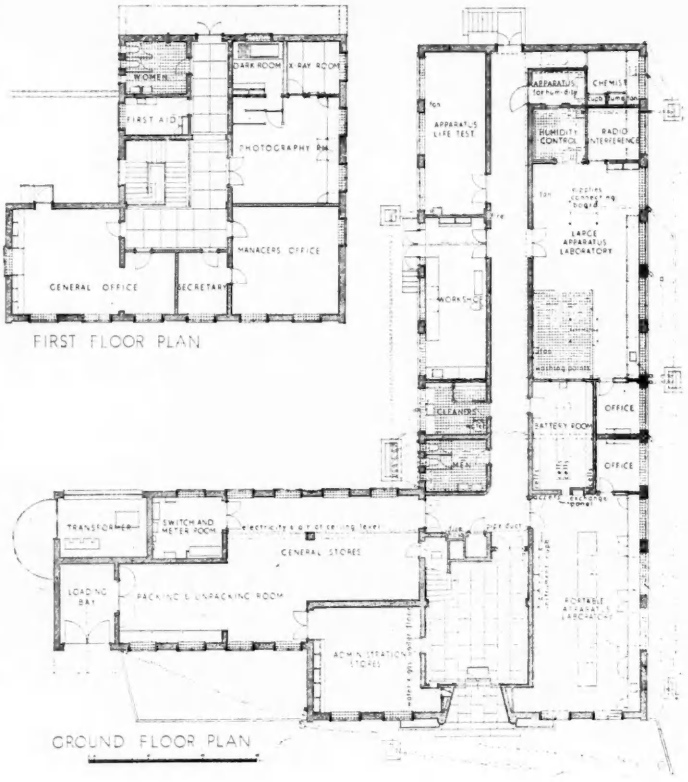
The electrical installation of the general services, comprising the heating circuits, ring mains and lighting, and the special services, comprising mainly the supplies to the various test points in the laboratories, are in screwed conduit,

that for the general services being sunk below the plaster, while the tubing for the special services is on the surfaces to allow greater flexibility for extensions and alterations. Following is a list of the sub-contractors :

Reinforcement, Expanded Metal Co., Ltd. ; bricks, Keymer Sand Faced Brick and Tile Co., Ltd. ; hollow-tile floors, Diespeker and Co. ; asphalt, Limmer and Trinidad Lake Asphalt Co. ; bitumastic felt, D. Anderson and Son ; terrazzo, Art Pavements and Decorations, Ltd. ; granitex, S. Towers and Son ; woods — French plane tree (Iroko), Brazilian teak (Freijo), Mallinson and Sons ; ironmongery, N. F. Ramsey and Co.

Handrails and guard rails, Dryad Metal Works ; dark room blinds, J. Avery and Co. ; metal windows and doors, L. E. Welstead ; acoustic works, Gyproc Products, Ltd. ; pipe line brackets, etc., Light Steelwork, Ltd. ; metal doors, Haywards, Ltd. ; hoists, G. Brady and Co. ; w.c. partitions, Venesta, Ltd. ; fans, Vent Axia, Ltd. ; vermiculite, Vermiculite (London),Ltd. ; rainwater goods, Henry Hope and Sons, Ltd. ; sanitary fittings, W. N. Froy and Sons ; paint and distemper, Leyland Paint and Varnish Co., Silexine Paints, Ltd. ; slotted inserts, Huntley and Sparks ; metal gates and screen, William Hayward and Sons.

Ventilating louvres, E. A. Harvey and Co. ; floors, The Terradura Flooring Co. ; X-ray glass, Cuthbert Andrews ; partitions, Supalith, Ltd. ; air conditioning plant, Air Control Installations, Ltd. ; electric light fittings, Merchant Adventurers, Ltd., Benjamin Electric Co., Crompton Parkinson, Ltd., R. and A. G. Gossland, General Electric Co., Philips Electrical, Ltd., Troughton and Young ; services (gas, air, water), Richard J. Aundrey Ltd.



EDA TESTING HOUSE, LEATHERHEAD, SURREY

Small appliances undergoing tests in the portable apparatus laboratory.

CONVERSION WORK AT GUY'S HOSPITAL MEDICAL SCHOOL

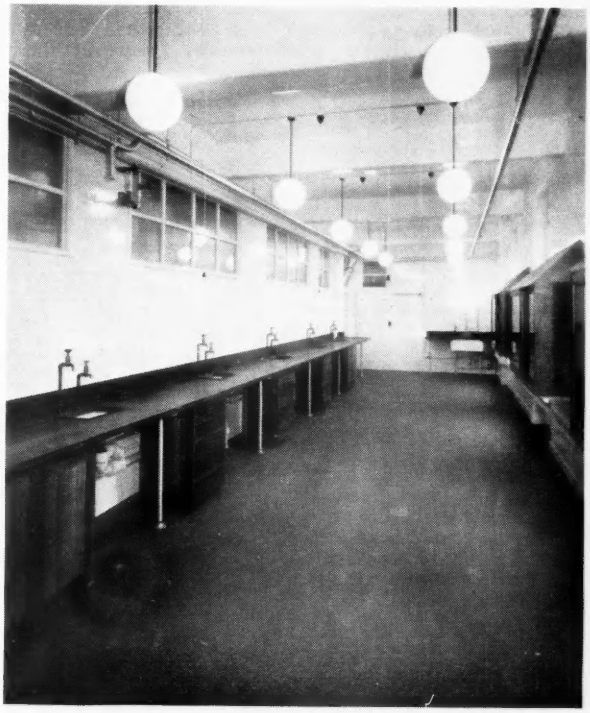
Architect
ALNER W. HALL, FRIBA
(YOUNG & HALL)

Supervising Architect
R. SILCOCK, ARIBA

Consulting Engineers
HOARE, LEA & PARTNERS

Quantity Surveyors
ERIC G. LYNDE

Builders
ASHBY & HORNER, LTD.



Respiration room, second floor.

Laboratory, third floor.

THE work recently completed at Guy's Hospital Medical School consisted of converting the second and third floors of an existing building into research and students' laboratories.

These floors were previously occupied by nurses, and it was desired to form out of the space available one floor of special research laboratories, the second, and on the top or third floor one large chemical laboratory for students.

The scheme involved a number of difficult problems which had to be solved in order to give the accommodation required. At the entrance end of the existing condition there were mezzanine floors containing nurses' bathrooms and lavatories. These had to be stripped out and new reinforced concrete beams inserted, and new floors cast to bring the floor level up to correspond with the main floor levels. This, in turn, meant a new flight of reinforced concrete stairs, taking up the various new levels.

A further great difficulty was to plan and construct the above-floor-level pipe ducts to take all the wastes and supply services to and from the various benches. This was made possible by the fact that there was a considerable thickness of screed and asphalt on the old floors, and by cutting channels through this extra thickness and lining them with special acid-resisting pipework the difficulties were overcome.

The new floors, except in a few rooms, were of Jarrah strips on wood bearers and this allowed for access panels wherever necessary to get at the ducts and pipework. The long room on the second floor had linoleum as a covering, and this was again chosen on account of its nearly jointless surface, which was considered essential as special work will be carried out in the room involving the use of mercury, which sometimes gets spilt and has to be carefully collected. The floor is given a slight drift so that the mercury can be brushed to a given point for easy collection.

The whole of the engineering services, including heating, hot and cold water, gas, electric light and power, and, where necessary, mechanical extract from the many fume cupboards and from the top floor, had to be completely reorganised, and this involved a number of problems which were eventually solved satisfactorily.

Both floors were completely redecorated, a high-gloss cream paint being used throughout.

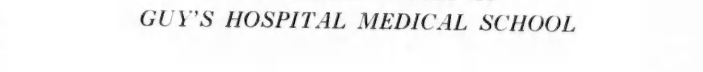
To satisfy the London County Council's requirements for escape in case of fire, and by agreement with the hospital authorities, arrangements were made to form an alternative way out through the Nurses' Home.

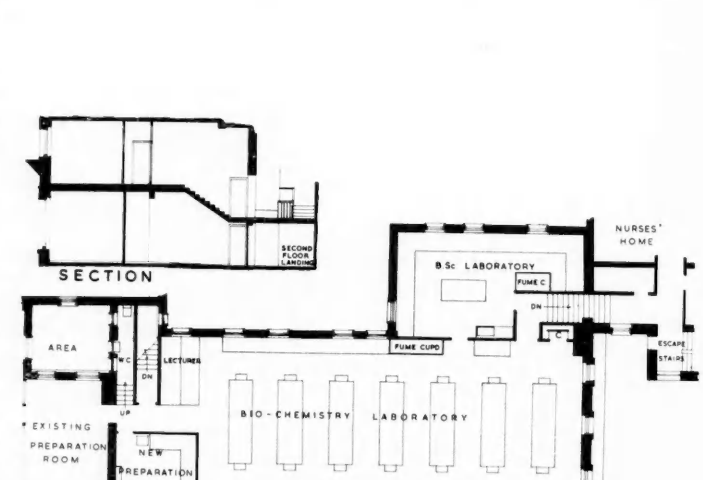
Special mosaic flooring on the second-floor corridor was carried out by the Hospital Works Department under the control of Mr. Bentley, the chief engineer. The contract sum for the work was £33,225. The following specialist contractors were employed :—

Heating and hot water, James Slater and Co. (Engineers), Ltd. ; ventilation of top floor, Comyn Ching (London), Ltd. ; electric light and power, T. Clark and Co., Ltd. ; plumbing and drainage, A. Grant and Sons, J. Martin (Brockley), Ltd. ; floors, Acme Flooring and Paving Co. (1904), Ltd. ; laboratory fittings, Chas. Hearson and Co., Ltd. ; paint, Indestructible Paint Co., Ltd.

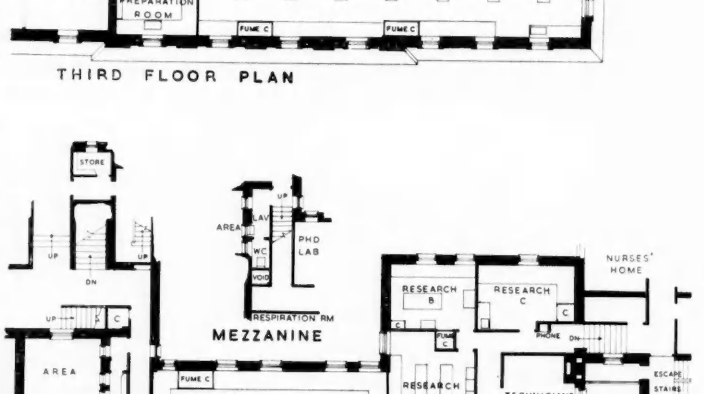
Tiles, Carter and Co., London, Ltd. ; doors, J. P. White and Sons, Ltd. ; blinds, R. J. Jeffreys and Son ; roof lights, Haywards, Ltd. ; ironmongery, James Gibbons, Ltd. ; chemical stoneware, Doulton, Ltd. ; linoleum, Cellulin Flooring Co., Ltd. ; asphalt, Val de Travers, Ltd.

CONVERSION WORK AT GUY'S HOSPITAL MEDICAL SCHOOL





THIRD FLOOR PLAN



SECOND FLOOR PLAN

INDUSTRY AND PRODUCTIVITY

A Paper at the Town Planning Institute

"INDUSTRY and Productivity" was the title of the paper in the series of "The Planners and the Planned," read by MR. P. A. MACRORY at a meeting of the Town Planning Institute held at the Livingstone Hall, Westminster, on December 3, and from which we take the following extracts. Mr. Macrory said:—

The object of this paper is to endeavour to make an assessment of the effect which planning, in all its forms and at all levels, has had upon industry, its development, its productivity and its efficiency.

Let me start bluntly. Having prepared the outline of this paper I got together a few representatives of industry, some of my colleagues on the FBI Location of Industry Committee and others with a knowledge of the subject, and we started off by considering the two questions which I have just posed. With no hesitation, and with complete unanimity, we decided that, up to date, planning has been very little other than a drag upon the efficiency of industry—in short, an almost unmitigated nuisance. It is not merely that planning has failed to make a contribution on the positive side. It has actually had a negative effect and acted as a brake in a situation in which, goodness knows, industry can do without any unnecessary brakes.

Having reached that rather unpalatable conclusion my friends and I went on with our discussion and we soon reached agreement upon another proposition, namely, that it was certainly not inevitable, not a law of nature, that planning should have the effect upon industry which, in our view, it has so far had. It is our view that it is both desirable and practicable to bring about a situation in which planning not only ceases to hamper us but begins actively to help us. And to bring about that position certain misconceptions, which have led to what we say are the mistakes of the past and present, must be cleared up.

Now planners in their handling of industry have two weapons with which to mould the development of industry in the direction in which they think that it should go. They have the positive weapon and the negative weapon. Broadly speaking, we see the positive approach when the planners say to us, as industrialists, "Please will you come here?" And the negative side is the planner saying to the industrialist, "Thou shalt not, on any account, go there." I would like to start by considering the positive side.

Now I suppose that the planner's real problem so far as industry is concerned is how he is to get the industrialist to move into those areas in which the national interest requires that industry should be established or re-established. The other side of the medal—how to get industry *out* of those areas in which the national interest requires that industry should be, may I say, disestablished, is not of such wide importance, though it is no doubt of very great importance in particular areas, such as London.

THE NATIONAL INTEREST

If this is a reasonably accurate statement of the planner's main problem with regard to industry, then embodied in it is what I think must be the real difficulty with which the planner is confronted in trying to decide upon the correct solution. The difficulty is to know what, in any given situation, really is the national interest. How is it to be recognised? It seems to have a number of faces and at times it wears one and at times another.

Sometimes a relatively short-term aspect seems to be all that counts in the mind of authority—closing the dollar gap, for example. At other times one gets the impression that the preponderant consideration, indeed the only consideration, is the fact that there is unemployment in, say, South Wales. One knows of cases in which industrialists, wanting to expand an established business in the area where they are already located, have been told "No! South Wales or nowhere" and the indisputable fact that if the extension is forced to South Wales, costs will rise sharply and the consumer—in other words, the nation—will have to pay more for the product, appears to be a matter of no concern at all to the authorities who control the industrialist's destiny. Then, again, strategic considerations must very often come into it.

Well, then, the national interest consists of a whole number of different factors, sometimes pulling in opposite directions, and these have to be weighed against each other and a right balance struck. And this, as it seems to me, means that the planner must really develop a kind of split personality. He must be able to look in several different directions at once and decide how much weight, in any given situation, is to be given to each of the various factors which together make up the national interest. The occasions when planning has proved an obstacle to the efficiency of industry are, I shall suggest, occasions when too much weight has been given to one or other of these factors or not enough to another. Practically always the decision must be in the nature of a compromise.

THE INDUSTRIALIST'S CHOICE

But, of course, there *are* areas where those responsible for the national planning can decide with a fair degree of certainty that they would like to see industry established or re-established. We would all agree, I think, that if you have derelict or semi-derelict industrial sites, with a local population accustomed to factory work, then, *all other things being equal*, it is plainly desirable that industry should go to such sites rather than break fresh ground. The catch lies in the saving clause "all other things being equal." So often they are not. The average industrialist is not a fool. He makes his own appreciation of what he wants and if, having done that, he shows a preference for a site in an area which on planning grounds may not seem nearly so attractive as, say, Merseyside, where you have a problem of almost chronic unemployment on your hands, he has probably got some good reason for his choice. It is no good, in such circumstances, trying to compel him to go to an area which he has decided against.

Well, then, you have your areas where you want to see industry established. How, using your positive approach rather than relying upon closing all the other avenues and giving the industrialist Hobson's choice, are you to set about it? First, I suppose, select your industries. You have to find the right industry for the right site and marry the two together.

You rule out, I suppose, the extractive industries. They cannot be moved to areas where there is nothing for them to extract. Nor are you likely to have much more success with what the Scott Report calls the "immobile or rooted" industries. That narrows your field. Then I would suggest that you beware of the mushroom businesses of the light industrial category which spring up, as they did just after the war, to take advantage of an inflationary boom by manufacturing more or less worthless novelties and collapse as soon as money gets a bit tighter. And another thing which I think that you ought to consider before plumping for certain industries for a certain area, is whether your existing labour force is going to be suitable for the type of industry which you have it in mind to bring in.

"PERSUASIVE" PLANNING

But let us suppose that, having weighed all these factors, you have got your area and you have decided on the kinds of industry which will be suitable for it. How do you set about bringing the one to the other? Much, of course, can be done by what Abercrombie calls "persuasive planning." That covers such things as the provision in advance of the services which industry needs—water, electricity, trade effluent disposal and so on—upon the scale which industry needs. And the provision by the authority of factories to rent can be a strong inducement, particularly to the small-scale industrialist.

Success will not, however, be achieved if two other elements essential to the prosperity of industry are lacking. I mean, of course, communications and accommodation, and of the two I would say that communications are of the more fundamental importance if only because accommodation is a matter which, given the will, can usually be taken care of in a reasonably short space of time, whereas communications need really long-term planning and may indeed be an almost insuperable objection. But while planners may recognise that communications are of the first importance and that our present communications are inadequate, I doubt whether they always recognise its application to the particular case with which they are dealing.

But even when you seem to have provided all that the industrialist can reasonably require, you may still find him slow to move. What more can be done? Of course, your battle is more than half won if you can get one big industry—say, the aircraft industry—into the area you have in mind. A host of smaller ancillary industries will then follow of their own accord. But how are you to get the big chap on the move? I suggest that there should be very much closer consultation with industry at a very much earlier stage, so that we can be told early on the areas where you want to see industry established and can give such advice as is in our power as to whether the area is suitable for industry at all and if so for what kinds of industry. For a long time now we have been urging that we should be given a clear statement of what *is* the policy behind the Distribution of Industry Acts—beyond what we all know in general terms as to the need to redress the lack of balance between the Midlands and the South on one hand and the North and Wales on the other. But we find the greatest difficulty in discovering what is the location of industry policy on the lower or regional level inside the region. We are usually left to deduce it for ourselves from the individual decisions—and as a result we are often mystified and disturbed. I would suggest that in the field of granting or refusing Industrial Development Certificates, as in many others, it is important not only that

justice should be done but that it should be plainly and manifestly seen to be done.

Let me turn to the negative side of planning and we will start with Planning Control. Now "control" is becoming a debased word. The man in the street is beginning to shudder when he hears the word "control." And the word "planning" is in some danger of suffering the same fate. Take these two words, each severally in danger of acquiring an evil aura, and you have "planning control."

Of course, industrialists accept the fact that in principle there must be planning control. But we do have some criticisms of the way in which planning control has been administered. The machinery creaks.

EVILS OF DELAY

It has been said that delegation is the curse of the Planning Acts. When you get to the level of the planning committees of district councils, to whom local planning authorities have delegated the task of considering applications for planning permission, the first thing you nearly always run up against is delay. The 1947 Act says that if you haven't had a decision in two months you may assume a refusal and appeal to the Minister. In practice the two months' maximum has been treated by many authorities as a minimum and the almost automatic response to an application for planning permission is a request for an extension of time. You are then in a dilemma. Grant the extension and delay is inevitable. Refuse it, and you are involved in an appeal to the Minister, and even more delay is inevitable.

Coupled with this inability to give a decision quickly we often find a tendency towards what appears to us to be shilly-shallying and evasion. This is particularly marked in the case of industrial businesses who realise that sooner or later they are going to have to move. What such a business needs to know is *when* it is going to be asked to move and, broadly, how much compensation, if any, can it expect to receive.

Our other main criticism of the application of the Planning Acts is, namely, that planning authorities carry their control down to a degree of detail which, we submit, is quite unnecessary and vexatious to the industrial developer. Indeed, it is this excessive concentration upon detail which is one of the main causes of the delay of which we complain. We have urged for a long time that once planning permission has been granted to use a site for a purpose such as a factory, it really should not be necessary to have to go through the whole rigmarole of obtaining planning permission for every little bit of minor development incidental to the authorised use.

CONCLUSION

I would conclude by saying that "planning" as such has had a difficult start in the post-war years, partly because the plans were not ready but mainly because the issues have been obscured by detailed controls upon industry's activities, for example, building licences, shortages of labour, allocations of materials and so on, which have hampered and irked us. From now on, orderly planning and its essential component, industrial development, have a chance, but only if you will realise that, however much you may dislike it, the planner cannot succeed without industry.

Co-ordination is essential and should, I suggest, go in the following order: first, between the Government Departments involved; second, between the Departments and planning officers; and third, between planning officers. And at all stages industry should be kept in the picture. Moreover, co-ordination is vital to the cost and provision of the services of persuasive planning, since such services can largely only be provided on a national basis.

DISCUSSION

In the discussion that followed SIR GEORGE PEPLER said the members had had it straight from the shoulder from Mr. Macrory, but their heads, if bloody, were unbowed, and many of the criticisms made by the author were directed to the national direction of the planning of industrial location, which was the concern of the Board of Trade, a body with which planners, perhaps, had as many differences as had industry, and so the members of the Institute could plead not guilty to the criticisms in the paper.

Since the Town and Country Planning Act of 1919 gave them a measure of opportunity, the members of the Institute had always endeavoured to ascertain the needs of industry, so that they could do what was possible, in planning the use of land, to meet those requirements.

All the members would heartily agree with Mr. Macrory that communications were vital to industry and vital to living. The difficulties of planning roads, however, were not so much those of planning as of finance, and county planning officers often found it difficult to put roads on their plans because they could not be sure that the money would be forthcoming in a foreseeable future for that purpose. He thought all planners would agree that they knew quite well how they would like to improve our road system and make it more efficient and safer, but it was this uncertainty of finance being available which made it difficult to put the roads on the plan.

The members would agree with Mr. Macrory's references to annoying delays in planning, but this was due to the fact that we had a democratic system of local government in this country, not so much to the technician. Decisions were made by people who put in a lot of time in service to the community and he could not see how some delay could be avoided.

MR. GORDON LOGIE said that until he came into close contact with industrialists he had assumed that one industry was very much like another, and that all of them were more or less of a nuisance in a town—a necessary evil, perhaps, but something to be kept strictly in its place, somewhere where it would do the least harm. But when he began to visit a few factories and talked to their owners and managers, he discovered that they were quite human, sometimes even intelligent, and that they had very decided views both on planning and on planners. Most of them approved of planning in the sense that they recognised that overall organisation was necessary in our complex urban civilisation. But they complained that planners were concentrating on inessentials, that they were gumming up the works with minor issues and were often completely ignoring one great function of town planning—to give industry good conditions in which to work. They asked very pertinently how planners could do this if they had not studied the needs of industry in detail, and he was forced to admit that the average planner did not know the particular needs of a carpet manufacturer or a brewer, for instance.

That, he thought, was the crux of the problem. Planners should not plan without knowledge. If they attempted to do so they were likely, in the long run, to do more harm than good.

One of the big problems in the field of industrial location was that of decentralisation, and we were making great efforts in the larger cities to persuade industries to move outwards.

The various suggestions which had been made recently to improve the rate of decentralisation of industry all involved some kind of financial assistance, either directly to industrialists to help pay for their losses while moving or to local authorities to cover the compensation which would be payable if any attempt were made to prevent the re-use of vacated industrial premises, to restrict their use to certain categories of tenants or to put a time limit on non-conforming factories. The ball was now clearly with the Government to provide grants on a sufficiently large scale to enable a real start to be made on decentralisation.

The second great problem was the more efficient correlation of the work of the Board of Trade, the Ministry of Housing and Local Government and the local planning authorities. Mr. Logie suggested that before the time came for the first quinquennial reviews some national plan would have to be prepared for industry and prepared, moreover, in full consultation with the local planning authorities and industry itself, so that all parties would be aware of its aims and implications and of their own part in the overall picture.

CO-ORDINATION LACKING

MR. P. E. A. JOHNSON-MARSHALL thought the paper should have been addressed to the President of the Board of Trade, the Minister of Agriculture and a number of senior civil servants. Planners, he said, were worried at the lack of a coherent national and regional policy in regard to industrial location. He asked what had happened to the co-ordinating committee which had been set up following one of the recommendations of the Barlow Report.

MR. E. H. FORD, formerly city engineer of Coventry, said he had been at pains to consult local industrialists about city plans and he had received considerable co-operation from them. He instanced the recent decision of the Minister of Housing and Local Government against the removal of the Singer factory from Coventry and the substitution of seven-storey flats as an indication that the Minister did not always approve of shifting local industry when it would cause disturbance of business.

MR. E. H. DOUBLEDAY expressed considerable disagreement with the paper and suggested that industry was not sufficiently ready to provide planners with the information necessary for them before they began to plan. He refused to agree that planners did not inquire of industry as to what were its needs in any area. He thought the Federation of British Industries should urge its constituent associations to discuss their problems with town planners.

MR. F. R. STEVENSON quoted the success now being achieved in Northern Norway in attracting industries to an area which was dark for a large part of the year and often snow- and ice-covered—largely by means of taxation relief and cheap loans from a Government fund. Could not something of the same kind be done in this country, he asked. MR. ARTHUR LING said that an attempt was now being made to plan the location of industry because industrialists had been left to place their factories where they wished in the past, and the result had not been satisfactory for the nation as a whole. The need for some kind of industrial planning in the national interest was now becoming obvious.

THE CLERK OF WORKS

His Duties and Functions Defined—I

By NORMAN P. GREIG, BA, Barrister-at-Law, HonFIQS, FIArb, FRSanI

WHILE not in every case essential, the appointment of a clerk of works, particularly in big building contracts, has become usual. The architect cannot be expected to spend his whole time on a particular job; hence the presence of someone, whose services are always available, who is continuously on the site while the contract works are being carried out, is not only an advantage to the contractor, but a great convenience to the architect himself.

But, unless the duties of the clerk of works are reasonably clear, and understood by architect and contractor, unpleasantness can occur and disputes result, which can affect the job to the detriment of the employer. Such unpleasantness can arise between the clerk and the architect himself, as well as between the clerk and the contractor. As, however, by usual custom, the clerk is nominated by the architect (but appointed and paid by the employer), the architect knows his man, and both, having been associated together on former occasions, know and recognise their own responsibilities.

Clause 8 of the RIBA Standard Form suggests the broad relationship that should exist between the architect and the clerk of works, viz.:—that the employer is entitled to appoint one (if he so wishes), and when the appointment is made, he is to act solely as an inspector on behalf of the employer, but under the direction of the architect, and the contractor is to give him every facility for the performance of that duty. Inspector, in this connection, can quite definitely be defined as "keeping an eye on all matters concerning the employer's interests," which means, broadly speaking, those matters covered by the contract documents, i.e., the specification or quantities, designs and conditions attached to the contract, and it is suggested, keeping the architect informed of the circumstances. So, the general position seems clear enough, but individual responsibilities are by no means easily separated in regard to a variety of matters, particularly when (for example) the clerk of works is both nominated and appointed by the employer—the usual position in regard to a contract with a local authority. Should, however, both the architect and the clerk of works be paid servants of the authority, unpleasantness is less likely to arise than if an independent architect is being employed, but this, of course, is not always so.

CLASHES WITH CONTRACTOR

The most serious clashes, however, can occur between the contractor and the clerk of works. A correspondent to this newspaper writes that he "is continually up against this difficulty—that a clerk of works will allow a builder to do something which the authority's architect" [the local authority's form is involved] "later rules is not in conformity with the specification, and calls upon the builder to rectify the work, to his great annoyance." Clearly such a state of things cannot tend to what the RIBA had in mind when, in the Explanatory Memorandum to the 1931 Form of Contract, they said: "It must be remembered that the satisfactory completion of an undertaking depends more upon the mutual confidence and understanding of the parties than upon any form of words in a contract"—"parties," we suggest, can be read to mean all those who are in some kind of authority on the site.

In these short articles an attempt will be made to particularise the duties of the clerk of works by reference to case law and to the practice as it is understood in big contract work.

The modern clerk of works is very different in many respects from his counterpart of, say, fifty years ago. He is usually highly qualified, and often highly experienced. He has a sound knowledge of building construction, building contracts and quantities, and very often has passed an examination in these (among other matters analogous to them) as well as possessing certificates from various technical schools covering sanitary science and even elementary chemistry and physics—truly a formidable person to a young architect supervising his first job. There could be occasions when such an architect could even ask advice on many matters from such a person without suffering any loss of dignity!

THE ARCHITECT'S RESPONSIBILITIES

But even these high qualifications should not result in an over-estimation of the clerk's powers and duties, and an underestimation of those of the architect. It is the architect who, under the contract, is responsible for the supervision of the work and must insist on his rights. It would be weakness (and dereliction of duty) if he *allowed* the clerk to assume functions not his, and he might be subject to an action for damages for negligence if he *instructed* the clerk to do certain things strictly within the architect's duties, and which ultimately involved the employer in some loss or damage.

It becomes clear, then, that, to act under the architect's "directions" can, on occasions, require the exercise of a great deal of tact. A candid discussion of a particular matter, combined with due appreciation of each other's responsibilities and position will often clear the air and lead to the mutual co-operation which should be aimed at. The architect is fairly entitled to regard the clerk as his assistant, and to some extent his agent (particularly in the passing over of his instructions to the general foreman). And, when he understands the relationship between the two, the contractor need show no hesitation in accepting, and carrying out, the instructions of the clerk, for he realises that they are certain to be those of the architect.

It is possible, apart from what has been said above, to lay down a general rule that while the responsibility for the general supervision of the contract works rests with the architect, he is entitled to leave *details* to the clerk of works. In the next article we shall illustrate by cases what the courts regard as "details" and what limitations they set upon any powers of delegation claimed by the architect. This, then, is the position under the RIBA Forms of Contract, and those modelled on it.

Under the "General Conditions of Contract for use in connection with Works of Civil Engineering Construction" an engineer's "representative" can be appointed by the employer or the engineer, from time to time. He is a resident engineer or assistant to the engineer, and his authority must be notified in writing to the contractor by the engineer. His powers and duties are, however, laid down and defined by the conditions. In general he is to watch, test and examine any materials used in the works. But the engineer can delegate to him, in writing, certain powers and authorities vested in the engineer, and if any decision of his is questioned by the contractor, it can be confirmed, reserved or varied by the engineer. With such an arrangement, the definiteness of the written instructions to the representative will prevent the kind of unpleasantness that can arise in a formal building contract in the manner stated above.

(To be continued)

ARBITRATION

Costs of the Award

IN NOVEMBER LAST, during the hearing of two appeals against the awards of Arbitrators, the Lord Chief Justice called attention to the fact that lay arbitrators seemed to think that the parties to the arbitration proceedings should pay their own costs, and very frequently made an order to that effect. He pointed out that it was settled practice as laid down by the House of Lords in *Donald Campbell and Coy., Ltd., v. Pollak* [1927] AC732 that, unless there were special circumstances, a successful party (or litigant) was entitled to his costs. The arbitrator, he insisted, must always exercise his discretion in the matter of costs judicially and not capriciously. In one of the above cases, an arbitrator deprived the winning party of his costs because (the arbitrator said) there was no evidence that in the period between the event giving rise to the arbitration and the date of the arbitration, any serious effort had been made by either party to settle the question. His Lordship observed that the arbitrator, by depriving the successful applicant of his costs, had failed to use his discretion judiciously and he, therefore, set aside the award in so far as it related to costs.

N. P. G.

REDEVELOPMENT PROPOSALS AT HULL

Divided Views on Multi-storey Flats

MEMBERS of the two parties in Hull City Council are divided on the scheme to build flats, estimated to cost £8,000 each, on the sites of important business premises in the city.

The proposal has been described as "fantastically expensive" by one Hull MP in the House of Commons. The scheme is part of Hull's development plan which is still to be approved by the Minister of Housing and Local Government.

Under the plan, more than 50 business premises are within the affected area, including a theatre, brewery's maltings, and a number of car showrooms. The area comprises about seven acres and is part of a proposed residential area. New permanent works have taken place nearby the area and three-storey flats are being built at a cost of £2,400 each.

The city's development plan went to the Minister in July, 1951, and after town planning committee protests against the delay in a decision the Minister said certain modifications were necessary.

Anti-Socialist members of the council feel that it is a mistake to bring flat development so close to the city centre and scrap valuable property at the same time.

The chairman of the town planning committee, however, suggests that no one can yet say what the cost would be. Owing to the shortage of land flats in the city he thought they were compelled to site there the maximum number of flats.

BUILDING'S TASK IN 1954

National President's Message

IN the course of a Christmas message to the Presidents of the ten Regional Federations of the National Federation of Building Trades Employers, the National President (Mr. Wilfred Horsfall) said: During the past 12 months events have taken the course which we as a Federation have always assured the Government they would take if wider opportunities to buy and build in free markets could be restored to the industry. At the same time we have more than fulfilled the hopes of the Government and, indeed, of the nation, in relation to housing; we have more than maintained, as we always said we could, the schools and factory building programmes at the determined levels; there has been no chaos and no price inflation following substantial increases in the licence-free building limits; and, what is more, we have not made unduly heavy demands on the labour market in accomplishing a remarkable expansion in building work.

We can, therefore, take particular pride in the special commendation we earned in the autumn from the Prime Minister, when he paid a tribute to "the capable building industry" for a fine piece of work.

In more recent months the Government has given further evidence of its faith in our ability to build more quickly and more economically and to look after our own affairs efficiently by removing most of the remaining controls on building. During 1954 it will be our duty and our aim to grasp the opportunities this wider freedom offers so that before another year is up we shall have said goodbye for ever to all forms of control on building.

HOUSING

Mr. Macmillan's decision to level off the programme at 300,000 houses a year—coupled with his slum clearance proposals—makes an increase in private enterprise housebuilding imperative. We are confident we can do the job provided we have the co-operation of the local authorities and the building societies. I am not yet satisfied that all local authorities are doing their utmost to encourage home-ownership by making land readily available to private builders and by dealing quickly with town planning applications; and I hope that as a result of their discussions with Mr. Macmillan, building societies will assist through a more liberal outlook in regard to the capital sums required from house purchasers.

MATERIALS

I have already publicly expressed our appreciation of the efforts made by materials manufacturers in achieving record levels of output during 1953. These results are welcome, but the industry is not left with any surplus stocks of materials. In fact, there have been, and still are, critical shortages—particularly of bricks—in different parts of the country, so we must continue to look to them for even higher output in 1954. If we can get the materials pipe-line so full that there is never any question of jobs being held up through lack of materials we shall have gone a long way towards reducing that part of the total cost of building for which building trades employers are directly responsible.

Whilst on this question of costs I would like to express the relief and gratification we all felt at the removal by the Minister of Materials of consumer licensing for timber. This has been one of the principal stumbling blocks to efficient and economical building since the war. With the freedom we now have to buy in the open market I am hoping that before long there will be a welcome reduction in the price and an improvement in the quality of this commodity.

BUILDING COSTS

This, of course, is the one big problem to which we must give our attention during the coming months. Happily the increase in productivity on the sites which began last year has continued throughout 1953 and I think we should acknowledge that. On the other hand we now have to find the money for the extra week's holiday with pay and the virtual certainty of a 1d. an hour wage increase under the sliding scale in February next. This latter means that the industry and those who pay the industry for its services will have to find another £10 million a year for wages alone. In addition, although there have been some indications of very modest reductions in the prices of some materials this item still accounts for some 60 per cent. of the cost of building operations, while transport and freight charges are higher than ever. There seems little chance of there being much outside help for builders to cut their prices, already at a dangerously high level, during 1954.

This is the background against which we must view the operatives' application for a 9d. an hour increase. If it were granted, this increase would add £90 million to the industry's annual wage bill and £90 to the price of an average-sized three-bedroomed house. Nor would the effects be confined to those contemplating home-ownership. Another 9d. an hour would put an additional 1s. 6d. a week on council house rents and would be bound also to influence those thinking of putting repair work in hand. The operatives' application will come before the National Joint Council at its meeting in January, when all aspects of the current situation will be taken fully into account. I will only add, therefore, that, contrary to the popular but quite erroneous belief that exists in the minds of certain sections of the operatives, there is no secret hoard from which the cost of this wage claim could be met without calling upon the client to pay more. The simple and plain truth is that our clients are already paying more than they can afford for our work. To ask them to pay still more would inevitably mean disaster for large numbers of those, employers as well as operatives, who earn their living in the building industry.

CHELTENHAM'S 3,000th HOUSE

Hesters Way Development

HOUSING development carried on by Cheltenham Corporation during the post-war period has taken them to numerous sites, but by far the largest is the development at Hesters Way, which is the Council's major development scheme. The use of the site for this purpose was projected as long ago as 1942, and during the ensuing eight years the development plan now being followed steadily evolved. The area for immediate development is 332 acres; the ultimate area, which includes a district for the accommodation of light industry, is 481 acres. Within this area it was planned to erect 2,650 dwellings, but it now looks as if this number will be exceeded. In addition to school sites and facilities for shopping, the plan includes for an informal park; allotments; playing fields; and groups of garages distributed throughout the area.

By 1950 all the opposition and impediments had been satisfactorily disposed of and construction started in August of that year in a small way on 220 houses, with the necessary roads and sewers. It was not until August of the following year that work on a major scale opened out as a result of urgent representations by the Foreign Office to secure housing accommodation for staff about to be transferred in considerable numbers to Cheltenham. Large scale contracts were entered into with Messrs. George Wimpey and Company, Limited during the Spring of 1951, amounting to something considerably in excess of £1,000,000. As sewers were constructed and roads built so the building of houses and flats commenced and has been maintained at high speed ever since. A formal handing over of the 2,000th post-war house took place at Hesters Way on November 21, 1952, so it will be seen that in a few days over a year a further 1,000 houses have been completed and handed over.

The housing achievement to date represents 808 houses and 1,027 flats. Of these 737 are built by traditional methods; 36 Cornish Units, and 1,062 "No Fines" concrete. All but a few of these have been completed and handed over. Included in the flats are 409 one-bedroom flats for Foreign Office employees.

Further areas within the main development have been opened up for building, and the 1954 programme to date includes a total of 513 dwellings, of which 172 are flats, and the balance houses—some traditional and others of non-traditional construction. The site runs with the westerly boundary of the Borough, and adjoins a permanent rural belt, a feature which it is believed will increase considerably the amenity of the area as well as justify the Council's action in building a considerable proportion of flats.

But house building is not the sole concern of the Housing Committee. Provision is made in the plan for six school sites, representing a total acreage of 91; a shopping street, with provision for a public hall or cinema; hotel; community centre; and such shops as the new development will support. This shopping road has been planned to link an adjoining pre-war development, known as St. Mark's, with the heart of the new development which is represented by an open square, appropriately named during the current year "Coronation Square." It is in this square that a tree-planting ceremony by all members of the Housing Committee took place immediately before the ceremony of handing-over the 3,000th house commences.

With the exception of the 409 single bedroom flats referred to above, the whole of the work, the planning, development, construction of roads and sewers, and the planning and building of houses and flats, has been under the control of the Borough Surveyor and Water Engineer, Mr. G.

Gould Marsland, MBE, BSc, MICE, and his staff, including: Mr. W. E. C. Bird, AMICE, MIMunE, AMIWE; Mr. W. Rust, LRIBA; Mr. P. J. Moran, AMICE, AMIMunE; Mr. D. L. Hunt, AMIMunE; Mr. G. E. Corry, AMICE.

The main contractors employed on the site are as follows:—748 houses and 791 flats, George Wimpey and Co., Ltd.; 32 houses and 24 flats, Leckhampton Estates, Ltd.; 204 one-bedroom flats, William Moss and Sons, Ltd.; 36 Cornish Unit houses, Selleck Nicholls and Co., Ltd.; Roads and sewers, George Wimpey and Co., Ltd., with the exception of Stage VI, which has been entrusted to The Hadsphaltic Construction, Co., Ltd.

Garage Extension Beyond Building Line

Interpretation of 1888 Act

A CASE concerning an application under a 65-years-old Act was the subject on December 21 of possibly the first appeal of its kind to be heard by Worcestershire Quarter Sessions. The appellant was Jacob Leonard Sidaway, of 25, Stennels-avenue, Lapal, Halesowen, who had plans prepared by a local architect for certain extensions to his premises, including an extension of the motor-garage adjoining his house.

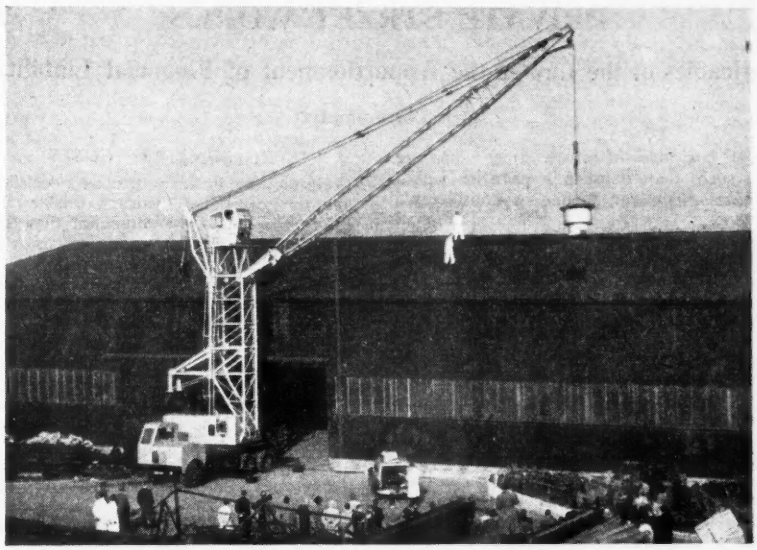
Mr. Sidaway desired an extension of 3 ft. to the front of his garage, in order to accommodate two cars, and this meant that the front of the garage would then be in line with the front bay window of the house. The plan was considered by Halesowen Town Council on July 1, and the proposed extensions approved, with the exception of that relating to the extension of the garage.

So far as the garage extension was concerned, the notice issued by the Borough Surveyor (Mr. T. W. Tivey) stated that the Council was not prepared to consent under Section 3 of the Public Health (Buildings in Streets) Act, 1888.

This is the Act and section under which local authorities permit bay windows and porches to be brought out in front of the building line. On instructions issued by Mr. H. Pugh, solicitor, Birmingham, on behalf of Mr. Sidaway, a new plan was prepared by Messrs. Robinson and Kay, architects, Stourbridge, which incorporated a porch over the front door with the proposed garage extension. This plan was considered by Halesowen Council on November 4, consent under the above-mentioned Act again being refused. Mr. Sidaway then appealed to the appeals committee of Worcestershire Quarter Sessions where evidence was given by Mr. Sidaway, confirming the submission of plans to Halesowen Council and that the garage extension was required to accommodate two cars. Evidence was given on behalf of the Council by the Borough Surveyor (Mr. Tivey) and by Mr. S. F. Hyett, of 23, Stennels-avenue, who objected to the proposed extension. Similar extensions to garages and houses in the same road and in particular one in Manor-lane, were referred to by counsel on behalf of the appellant. Those in Stennels-avenue were stated by the Surveyor to have been approved in 1934 and the one in Manor-lane in September, 1953.

After hearing the evidence, the Chairman said the appeal would be allowed and the plan approved, in accordance with the appellant undertaking to fit sliding doors.

The case is of particular interest, as in recent months a number of applications have been made to Halesowen Council for permission to extend fronts of garages. Some have been granted and some refused.



Coles crane, model LT2310, with 60-ft. jib, demonstrating height of lift and outreach.

A MOBILE CRANE ON PNEUMATIC TYRES

Demonstration at Sunderland

WHAT is claimed to be the first crane in the world which is fully mobile on pneumatic tyres and which is readily convertible from a tower crane to a strut jib crane was recently demonstrated by Steels Engineering Products, Ltd., at their Crown Works, Sunderland.

The machine, the Coles lorry-mounted tower crane, has the added ability to raise and lower its own tower, to travel over long distances from site to site, to move all round a building or work inside it, and to operate as a tower crane at certain stages of the work and as a strut jib crane at others.

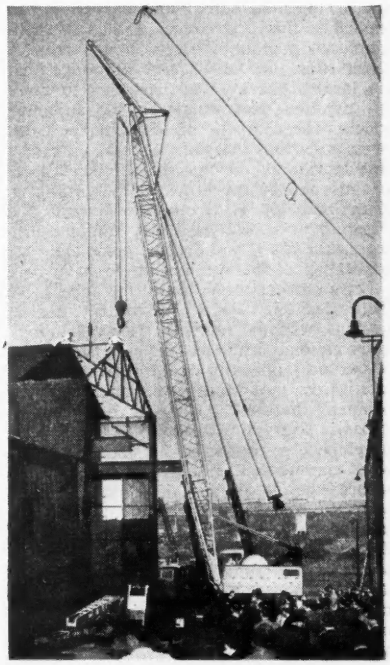
The crane is electrically operated, but generates its own power by means of a diesel or petrol engine, which makes it independent of trailing cables and power stations. The crane itself has three main motions: hoisting, derricking, and slewing, each powered by separate electric motors.

The chassis upon which the crane is mounted is a specially designed Coles crane carrier of the rigid 6 by 4 wheel drive type. The crane travels on six large pneumatic-tyred road wheels, which ensure efficient operation on good or bad ground. Telescopic girder stabilisers are fitted to provide a fixed base when handling loads. The model demonstrated, which is fitted with a 60-ft. tubular jib, will lift five long tons at 24 ft. radius to a height of 82 ft. 6 in. above ground level. It will handle two long tons at 42 ft. radius to a height of 71 ft. 6 in. above ground level. Hoist speeds are available up to 120 ft. per minute with one long ton on the hook.

The crane operator is seated 36 ft. above ground, a position giving good visibility. The travel motion can be operated with the tower erected, but for travelling greater distances the machine can lower its own tower to provide a clearance height of 22 ft. 9 in. The conversion from tower crane to a strut jib crane was demonstrated in this operation, taking 58 minutes.

In addition, the Coles self-propelled model S2310, also on pneumatic tyres, fitted with 80 ft. tubular jib, 15 ft. fly extension, and twin hoisting barrels, demonstrated the placing of building components, the main jib being used to position and hold the heavy components, whilst ancillary equipment and smaller members were lifted into position with the fly extension.

Other models were also demonstrated.



Coles crane, model S2310, with 80-ft. jib and 15-ft. fly jib handling small member on the fly jib and roof truss on the main jib while bolts are tightened up.

PRIVATE STREET WORKS

Intricacies of the Law in the Apportionment of Financial Liability

By a Correspondent

THE intricacies of private street works are such that only the specialist would wish to understand them. A considerable amount of discretion is left to the local authority, which is exercised fairly. The news that the local council have decided to make up the street, and the receipt of a provisional apportionment notice, usually means that there is nothing that can be done about it but make payment, or if the sum is rather large to ask for payment to be spread over, say, ten years. The only difficulty is that unpaid street works rank as a charge against the property, and should be wiped off before the property is sold.

The general philosophy behind street works liability is that the property does benefit in value by the street being made up, and that therefore the frontagers should pay. Some privileged bodies benefit by exemption, but the other frontagers do not suffer, as their share is borne by the local authority. The local authority can assist out of the rates under S. 15 of the Private Street Works Act, 1892, but except in special circumstances refuse to do so. They accept the view that as previous frontagers have borne the responsibility for all other streets in the town, it would be unfair to them if the present frontagers were exempted or assisted.

Among the list of objections that can be put forward is one that the private street works are unreasonable. A recent case, *Southgate Corporation* v. *Park Estates, Ltd.*, has a dual interest for builders in view of the fact that it relates not only to private street works but also to planning. The company were the owners of land on which they wished to build some houses. They had applied to the local council and their application for planning permission was refused. About this time they received notice that the local authority was proposing to carry out private street works on the adjoining street. The company protested to the court of petty sessions that the work was unreasonable in view of the fact that if their appeal was allowed by the Minister, the cutting up of the road for laying on gas, electricity and water services, and the heavy traffic churning up the road, would waste completely the £6,000 which the venture would have cost.

Petty sessions turned down the appeal, but their decision was reversed by quarter sessions, with the result that the resolutions, specifications, estimates and apportionments of the local authority were quashed. Shortly afterwards the Minister indicated to the company that he had allowed their planning appeal. Everything seemed settled for the developers to build before the roadworks were commenced, and the High Court, to whom the local authority had in turn appealed, deferred their decision in order to give priority to the building and thus reduce the question to an academic one. But for some reason building was again deferred. Thus the matter came again before a court comprising the Lord Chief Justice and two other judges. The decision of quarter sessions was affirmed in favour of the company. The Court followed a 19th-century decision which decided that it was a good objection to the proposed paving, sewering, etc., that the proposed street was not sufficiently wide.

"UNREASONABLE" COSTS

It is interesting, however, that by a decision of another Lord Chief Justice, Lord Hewart in 1938, it is not a just complaint that the frontagers are bearing an excessive cost. It can happen that a new building estate grows up near a narrow unmade street, or that two trunk roads are divided by a narrow street which probably existed before the major roads were built. In this case the frontagers cannot claim that the cost to them is excessive in view of the limited needs of their own street.

The answer of the Court is laid down in the case of *Hornchurch UDC v Allen* that the frontagers cannot rightly object because the law put the responsibility on the frontagers, and, viewing all the circumstances, it is not unreasonable for a road of that width to be made.

In the more recent case, Lord Goddard suggested that the local authority in such circumstances might properly have made a contribution under S. 15 to meet the excess width, but it does not appear that any grant was made in 1938. The distinction between the two cases is not easy, as both matters are concerned with claims of unreasonableness by virtue of financial loss. The exemption arises where the unreasonableness lies outside the question of financial responsibility for street works. Where the incidence falls heavily on any individuals through circumstances similar to those detailed in this paragraph, most local authorities would be prepared to make a contribution.

STREET LIGHTING

Another aspect of private street works normally hidden in obscurity is street lighting. There appears to be considerable doubt generally as to who is required to provide street lighting. Although electricity has been nationalised, considerable responsibility is exercised by local authorities over the means of lighting, including the provision of lighting standards. The responsibility for these has not passed to the Electricity Board, and the 19th-century Act governing the position still applies. There is no duty on the local authority to supply street lighting; the operative word is *may*.

So the local authority virtually decide whether they will supply the means of lighting themselves at their own expense or whether they will insist on it being done as a private street works charge. In other words, they are able to put the onus on the estate developer. Policy is by no means uniform among local authorities. Many of them used to supply the lighting columns when they were themselves the electricity undertakers, and could complete the one job more successfully than by sharing the task with somebody else.

It is perhaps on account of this traditional policy that they continue to do so, and thus to some extent subsidise the developer out of the rates. If, however, the responsibility is put on the developer, then he will have to enter into an agreement with the electricity authority and may have to comply with requirements of the local planning committee on points relating to the standards and colour of the shades. They will probably have to conform to the other lighting arrangements in the town. This is wise from every point of view, and the estate developer will no doubt be pleased to obtain the advice of those who purchase these requirements in mass quantities.

Among other points which arise in practice is this one: A local authority may control street works under one of two Acts namely, the Public Health Act, 1875, or the Private Street Works Act, 1892. The procedures are different and so are the detailed requirements. The builder may be faced with the fact that he owns land on one side of a street and the local authority wish to make up half of the street, in fact to the centre of the street. In broad terms, if the local authority are proceeding under the 1875 Act, only the owners on the side of the street involved are liable for the expense, but if action is taken under the 1892 Act, then the owners on both sides are liable. The position is complicated where a hybrid local Act exists containing the best or the worst of both Acts.

SEWERING

It may happen that the proposal of the local authority is not to pave or light, but to sewer. There is a distinction between paving and sewering in that once a sewer has been laid and its adequacy has not been disputed, the frontagers are relieved of further responsibility. Most of the cases relating to sewers are in the 19th century, but it might be of interest to know that only last year a case was taken before the justices, where it was claimed that the road had already been sewered to the satisfaction of the local authority. In point of fact, the sewer in question did not appear on the local authority's sewer map, and was found by the justices, who decide such points as fact, not to be a sewer for the road but for a few houses in the street. Nevertheless, it is advisable if the local authority propose to sewer and charge the owner that the owner should be certain that a previous sewer does not exist. Even local authority maps are not infallible.

From these illustrations it can be realised that, despite deferred street works and the advent of the New Streets Act, street works still remain a lively subject, and discussion of present developments may assist in future problems.

BATC PRIZES

Awards to Over 400 Apprentices

REGISTERED BUILDING APPRENTICES, recommended through regional joint apprenticeship committees, are again being awarded prizes by the Building Apprenticeship and Training Council for outstanding work during the year, the Ministry of Works has announced. Awards are graded and valued at £2, £1 10s. and £1, respectively. Some 460-odd apprentices will receive prizes totalling about £600.

Of particular interest this year is the participation in the scheme for the first time of apprentices in the electrical contracting industry. Awards to them are graded in the same way; thirty boys will receive prizes to a total value of £60.

Prizewinners are recommended to choose suitable books on subjects connected with the industry, and a list is being provided to assist students in their choice. A specially designed book-plate is supplied by the Council to be fixed to books chosen.

Arrangements for the presentation of prizes to successful candidates at suitable functions are in hand. Presentations will take place early in the New Year.

IN PARLIAMENT

Work for Unemployed

BEFORE the House rose for the Christmas recess, LIEUT.-COL. LIPTON, on December 17, asked the Minister of Labour what steps he would take to find alternative employment for building workers dismissed by local authorities in London as a result of cuts in the housing repair programme.

MR. HAROLD WATKINSON, who replied, said the employment exchanges would do everything possible to find suitable employment for any unemployed workers who register for employment. He was, however, not aware of any general cuts in housing repair work in London likely to lead to dismissals by local authorities of appreciable numbers of men from their building labour forces.

Hospital Building

On December 17 MR. KENNETH ROBINSON asked the Minister of Health how many new hospitals were under construction in England and Wales, showing mental hospitals and mental deficiency hospitals separately.

MR. IAIN MACLEOD said one new mental deficiency hospital near Southport for which preliminary site works were in progress.

MR. ROBINSON said that this was disappointing. The country was falling steadily behind almost every other European country in the construction of new hospitals.

MR. MACLEOD said he was aware that it had not been possible to build new hospitals since the war, but none were built during the Labour Government's six years of office, and this Government was at least making a start.

MR. PAGET asked if the Minister had sufficient staff for existing hospitals.

MR. MACLEOD said that in many cases staff difficulties were not so much those of total number but of distribution. There remained considerable difficulties in the sanatoria and mental hospitals.

MR. SPARKS asked in which new towns new hospitals had been built.

MR. MACLEOD replied that it was for the regional hospital boards to plan the development of hospital facilities, and he knew that the boards for the regions concerned were aware of the needs of the new towns and took them into account. Present limitations on hospital capital development generally had so far prevented any large-scale new building to meet these needs, and no new hospital had been built. Meanwhile, reliance must be placed on existing hospitals, at many of which additional facilities had been provided.

MR. SPARKS said that there was a growing deficiency of hospital accommodation in the new towns, and building ought to keep pace with the increasing population.

MR. MACLEOD said that he was well aware of the difficulties.

MR. KENNETH ROBINSON said that special consideration had been given by all other departments to the other essential services in the new towns. Why was his Ministry falling behind? It was beyond the powers of certain regional boards to cope with this difficulty within their normal capital resources.

MR. MACLEOD said that in the region which the hon. member had in mind he was meeting a deputation to discuss this point. It was true that the cost of a new hospital, between £1m. and £4m., was too great to be provided out of the region's resources, and when the new building became possible it would have to be provided from central funds.

MR. HAMILTON asked the Secretary of State for Scotland what was the estimated cost of hospital building started in the first nine months of 1953: and what was the total estimated cost of work done in the same period in Scotland.

MR. JAMES STUART said that the estimated cost of all hospital building schemes started during the first nine months of 1953 was approximately £930,000, while the cost of all building work done during that period was just over £1,000,000.

Scottish Grant

On December 17, in reply to MR. FORMAN, the Secretary of State for Scotland, MR. JAMES STUART, said that the Exchequer contributions paid to the Scottish Special Housing Association in the year ended October, 1953, amounted to £951,998.

Architectural Education

On December 17 MR. WILLIAM WELLS asked the Minister of Education, on what grounds her department was rejecting applications for a 75 per cent. grant in respect of courses in architecture and interior decoration in technological institutions.

MISS HORSBRUGH said that the special rate of grant was intended to encourage the development of advanced courses in technology which would lead directly to an increase of industrial efficiency and productivity. She regretted that she could not regard the subjects mentioned as satisfying those conditions.

School-Building Plans

On December 17 MR. SWINGLER asked the Minister of Education if, in view of the greater availability of building resources, she would now expand the school-building programme.

MISS HORSBRUGH said that the value of the major primary and secondary school building projects in the programme to be started in 1954/55 was about the same as that for the current year and she could not at present increase it. The allocation for minor educational building projects for 1954/55 was about 20 per cent. more than that for the current year.

Dartford-Purfleet Tunnel

On December 17, in reply to Mr. Dodds, the Minister of Transport, MR. LENNOX-BOYD, said that it was proposed to restart work on the Dartford-Purfleet Tunnel in 1955/56. If all four shields were used on this tunnel, the work should be completed in about five or six years, and the shields would remain in use for about three and a half years after restarting work. The question whether the shields would be used for the Whiteinch-Linthouse Tunnel, or whether new shields would be required, would be considered in relation to the plans for that tunnel.

Royal Assent

On December 17 the Royal Assent was given to the Armed Forces (Housing Loans) Act.

Building Licences

On December 18 SIR WILLIAM DARLING asked the Minister of Works the amount and number of building licences granted in Scotland, excluding State, municipal and nationalised industry, for the most recent and convenient period; and the corresponding figures for the County and City of London.

SIR DAVID ECCLES said that figures were available for Scotland and for the London Region, which covered an area larger than the City and County of London. In the first ten months of 1953, 2,534 licences for new work to a value of nearly £41m. were issued in the London Region by the Ministry of Works and in the same period 2,449 licences to a value of nearly £13m. were issued in Scotland. These figures excluded direct Government work, authorised work and licences for nationalised industries. During the same period there was a great increase in Scottish new house construction, the output of which was over £46m., an increase of 39 per cent. on the corresponding period of 1952.

CERTIFIED CARPENTERS

New President Installed

AT THEIR annual general meeting in London on December 5, the Incorporated British Institute of Certified Carpenters' chairman of council, Mr. G. T. B. Winstanley, invested the new president with the collar and badge of office before a packed assembly.

MR. WINSTANLEY, introducing Lt.-Col. William Watkins Dove, CBE, TD, FSA, FIOB, to the members said: "We are indeed singularly fortunate in having Col. Dove, who brings with him for our benefit and prestige the position of senior warden of the Worshipful Company of Carpenters. He is a member of the council of the City and Guilds of London Institute and chairman of the carpentry and joinery advisory committee of that Institute. Also, being the governing director of one of the major building contractors, he brings an understanding and appreciation of our interests, aspirations and difficulties, aims and objects."

LT.-COL. DOVE spoke of the great honour he felt in being elected to this office, not only because of his connections with the Carpenters' Company, but because he was a builder and was once a carpenter himself. "I shall do my best," he said, "to uphold the great traditions of this Institute."

He referred to the City Livery Companies, the Joiners' as well as the Carpenters' Company, and said that although they worked together amicably now, this had not always been the case. About 1632 he had discovered the two Companies were obliged to take their differences to the Lord Mayor to see if he could find a way out. Apparently it was decided that among other things the joiners were responsible for making a bedstead if it was glued together, but bedsteads made of boards and nails were a job for the carpenter. The joiner was not allowed to use nails, the carpenter was barred from using glue. There was no split of responsibilities now, both worked together.

The new chairman of council of IBICC is Mr. M. T. Telling.

TOWN PLANNING DECISION

Ban on "Cubist" Type Houses Confirmed by Minister

THE REFUSAL of the Belford, RDC to allow the construction of two three-storey "cubist" style houses at the seaside village of Beadnell, Northumberland, has been upheld by the Minister of Housing and Local Government. The proposed design of the houses incorporated a flat sun roof and exterior mahogany panelling.

The Minister says he has reached the conclusion that houses of the design proposed would dominate the surroundings to an undesirable extent and would be out of harmony with the general run of buildings in the neighbourhood.

PROSPECT OF BRITAIN

Has Housing Really Escaped from Victorianism?

"AN observer can tell as much about society from its housing as he can tell about a person from his face and the way he walks," said MR. CHRISTOPHER SALMON, when he gave the seventh talk in his series entitled "Prospect of Britain," in the BBC third programme on November 30.

"It is from these," he said, "the stranger must take his first impression, and by them probably remember afterwards what he has come to know, the personality of the man, and the culture of the society. But looking at the housing of one's own country is self-revealing, a family album. There in the old buildings are pictures of one's cousins and aunts, and great-grandparents, and then, turning the page, one sees, suddenly, in contemporary building a photograph of one's social self. And one struggles against it, one refuses to recognise it, one calls it a distortion. It reminds one of one's uncle or one's grandfather from whom, one hoped, one had grown away. And here comes a question. If some of our new building estates look, as I think they do, surprisingly like Victorian streets, have we misrepresented ourselves in them, or have we not moved as far away from Victorian values as we think?

"It doesn't seem to me that we can escape from believing that architecture does reveal society's character. As a body is the person's, so housing is society's point of contact with the physical world. Personality is what the person, and culture is what the society, makes out of its physical needs. There are two ways in which we treat these physical needs. We may write them off as so many limiting conditions and hindrances. Our physical will then become material problems which we must solve in material terms before anything spiritual is possible. But alternatively, we may conceive our physical needs from the beginning as opportunities and find means, from the beginning, to make their satisfaction spiritually expressive, as we have found means, for instance, to make out of lust, love, and out of the need to eat the domestic occasion and the art of cooking, and, out of the need for shelter, hearth and home, and out of mutual dependence, the village green, and the town crescent and square.

English Domestic Architecture

"Now for 400 years, up to the middle of the nineteenth century, the builders and architects of English houses had succeeded in turning society's physical needs to excellent social account. The result, we say now, was one of the best traditions of domestic architecture in the world, but the contemporary cause must have been, all alone, a particular quality of social life and social outlook. Society did not make its architectural statement with one voice, then; it was rather an anthology made by local communities, with here and there a careful individual statement by a practised hand. None the less the statements were consistently social.

"The Victorians were the first, before us, to write their architectural statements in one hand right across the country. They had a rapidly growing and rapidly moving population to house, and they did it by turning building, for the first time, into an industry.

"But they did something else, which turning building into an industry did not, it seems to me, make necessary at all, they turned housing and settlement into the business of providing people with merely material accommodation. I believe this was a crisis in our social history, for, whoever treats housing as exclusively a material problem instead of giving society a body to use, puts it into a strait-jacket. It seems to me that the Victorians did, with their streets and houses, put British society into a strait-jacket, in the industrial towns and in the suburbs and along a great deal of our coast.

The Victorian Statement

"No British community ever endorsed the Victorian statements. They were hasty generalisations of contractors. But they had enormous effect. Perhaps society let them pass without comment, or at least without contradiction, because they seemed an inevitable industrial conclusion and in line with the economic if not with social values. But it seems to me to be open to us to argue to-day, that if the Victorians thought industry a purely material instrument, that may have been because society had never taken industry over. Our housing problem is physically just as large and certainly no less urgent than the Victorians', and we are working through a building industry just as they did, to solve it. But unlike them we are tackling it, collectively and deliberately as a social problem. It was in order to reinstate certain social values that we undertook public housing as a social duty, so that we have an exciting chance of showing, on the largest scale, how we can through industry turn material needs to social advantage. When the Victorians brought manufacture to bear on the house they converted it into as much merely measurable warmth and shelter. You could have it large or small, according to what you could pay, and you could have it plain or decorated, but the bricks and the mortar were never transformed into anything social or expressive. And the street became a kind of prisoner's walk because it was no more than the house indefinitely repeated. New industrial building does not have to make in this way a physical prisoner of society. It does not follow that because you standardise the construction, or even prefabricate the components of a house, the house, when you've built it, can be nothing more than a physical satisfaction of physical need. And we know that our own architects and planners and engineers poured into their schemes for post-war British housing quantities of the most enlightened and positive social thinking.

"We began to grow socially conscious of housing as a problem at least as long ago as 1909. It was the first Town Planning Act of that year which encouraged the municipalities to make housing surveys. By 1914 Birmingham, for instance, had discovered that nearly one in three of all her inhabited dwellings was really unfit to be lived in. When a local authority calls a house unfit you may be sure that it is. One in every three of Birmingham's houses had no wc of its own. One in every four had no separate water supply, no sinks and no drains.

"Then there was over-crowding. In 1914 a third of our total population was living at the density of more than three people to two rooms. Two rooms did not mean two bedrooms. A kitchen, for instance, if there was one, or a bathroom, counted as one room. In 1919 we set to work on the strength of our information, and by 1939 we had cured about two thirds of our over-crowding, though we still had some bad slums. Then for six years—during the war—we could do no building, and by the time the war was over we were 600,000 houses worse off than we had been before. A quarter of a million had been destroyed or damaged by bombing, and the rest, which must have been almost condemnable in 1939, had become so six years later.

"What seems at first so baffling is that in spite of town building the need grows no less. We built one and a half million houses between the two wars, and already since 1945 we have built a million, but last year five per cent. of the family population in England and Wales and 31 per cent. of the population of Scotland was still living in two or less rooms. Scotland is much worse off for houses than England and Wales. If England and Wales stopped building to-morrow and Scotland went on building at her present rate for 30 years, she would have then caught up to where England and Wales are now. In 1945 the City Architect and Planning Officer of Glasgow estimated the City's need at 42,000 new dwellings. Since then it has built 25,000 and without any population increase its need is 42,000 still. The explanation has two parts. The size of families, and the age at which people marry, are both going down, so in a given number of population, more families than did now need separate homes. In 1911 an average group of 100 people were living as 23 families. In 1939 they were living at 28. In 1951, when the last figure was made, they were living at 31. And the second part of the explanation is, that as steadily as you build new houses, old ones tumble down. In 1952 Glasgow was 42,0000 dwellings short of the total 345,000 it needed. During this year Glasgow hopes it will have built 4,000 dwellings. This is their highest annual figure yet, but if they could keep it up, by 1962 they would have as many houses as they estimated they needed last year. But, if the average life of a house is 100 years (most local authorities are building at present for 60), the normal replacement rate on Glasgow's total housing would be 3,450 a year. This means that if Glasgow had started, which she didn't, in 1952, with all the houses she had needed, she would, by building at this unprecedented rate of 4,000 houses a year, be only just keeping her head above water."

The Question of Land

Mr. Salmon went on to refer to the problem of the slums, but problems, he said, multiplied on every hand.

There was, for instance, the difficult question of land. If a town spreads it might be at the cost of farmland which was precious for the food it could grow. Between the wars England and Wales swallowed up farmland at the rate of 300 acres every day. And a policy of building on the outskirts might leave the heart of the city cold.

Then there was reconditioning, which the modification of rent restrictions might help. "At present," he said, "we are losing 100,000 houses a year from lack of repairs. Repairs could be carried out largely without taking men away from those at work on new buildings. And repairing uses less material than new building, and materials are scarce. And the building industry itself is packed with interesting problems. And there is the crucial problem of rents. Though we use political machinery we still properly call housing a social problem. That is what it is, and the values we must make up our minds about are social too."

TENDERING PROCEDURE FROM THE BUILDER'S POINT OF VIEW

A Talk to Junior Quantity Surveyors of the RICS

THE merits and demerits of various tendering systems were analysed by MR. W. TOMPKINS when he addressed junior quantity surveying members of the Royal Institution of Chartered Surveyors at a meeting held recently in London.

Mr. Tompkins first described two methods of tendering used mainly in Eastern countries but, owing to their inefficiency, he dismissed them as being unworthy of close consideration and passed on to examine the American and British procedure. To the builder, he said, the more favourable aspects of the American system were as follows:—

1. He can see from the drawings not only what he is expected to build but the type of drawings he will be expected to build from and, naturally, in order to get a complete price, the documents at this stage are, or should be, comprehensive.

2. The architect will have made up his mind as to what he requires built before he goes to tender and not, as is so often the case, after the quantity surveyor has prepared his bills of quantities.

3. There is less likelihood of a change of design or details, and if such happens there is, due to the absence of bills of quantities, a fair chance that the builder will receive appropriate payment for it. In this respect I would refute the commonly held belief that the builder makes money out of the variations. It does sometimes happen that the builder can get away from a price that he does not like very much but, generally speaking, the disorganisation which occurs due to even a minor variation is out of proportion to the price he receives for it.

British Procedure

Mr. Tompkins then went on to give his opinion on several matters concerning tendering procedure that had been put to him by the organising committee before the meeting. These were the points he made:—

1.—Our existing tendering procedure is undoubtedly the best in the initial stages and promotes a keen competitive spirit on a known basis. It is not of necessity the most economical in the long run if the client, through his architect, is allowed endless and unnecessary variations. This point is, however, dealt with in the final summing up and the suggested tendering procedure I would like to see in operation.

2.—The bills of quantities could undoubtedly be improved in certain respects. The National Federation of Building Trades Employers have put forward certain suggestions to your Institution, many of which I would like to see in general use. Among the foremost of these is a comprehensive description of the proposed building in general, giving as much general information as is possible, pointing out any particular or unusual features and, in short, trying to convey to the contractor what every good bill of quantities should—a clear and comprehensive picture of the intended structure.

I do not consider that the present method of describing formwork is as descriptive as it should be. Neither is it considered that concrete is always described in such fashion that the contractor will appreciate any special characteristics of the work. (These two points are already under discussion by your Committee.)

There are many other matters which I consider could be better described, particularly any concrete which is cast to more or less impossible sections, needing special means of placing and finishing to very fine limits. However, there are many new materials on the market which are special in nature and for which often very meagre descriptions are given.

3.—It would be of great assistance if the contractor was paid a fee for submitting his tender. The problem would be, of course, to see that it was in fact a bona fide bid, and such a scheme, if properly applied, would not only result in a general reduction in the contractors' overheads but would also have a tendency to reduce taking of cover prices.

Freedom for the Contractor

4.—The nomination of a contractor to assist in pre-planning is worthy of consideration, especially on contracts involving special techniques, stressed concrete, etc., and properly arranged can produce worthwhile savings both in time and expenditure. The contractor should, in some measure, be allowed to influence design and planning to ensure maximum efficiency and full use of his plant, construction and re-use of formwork, etc., and to arrange such a sequence of work as to provide continuity and peak output at the earliest possible moment. His practical knowledge should be utilised to the full and complete working drawings and details prepared before a start is made on the site.

Unfortunately many architects are persuaded by their clients to commence site works long before the drawings are properly prepared and it would seem that it is often forgotten that time spent on the drawing board before the contract is commenced is much cheaper from everybody's point of view than waiting time on the site. In such a scheme the quantity surveyor could prepare a target cost before the work is commenced, this figure being agreed with the builder and arrangements made so that the client and builder share in any resultant savings which could be effected by pre-planning or alternative constructions. Special arrangements have been entered into before and the LCC are now considering some such scheme.

Naturally, there is a necessity for the appointment of a competent builder, and once he is appointed, absolute reliance should be placed on any practical suggestion put forward by him. There is, I think, good grounds for the hope that such an arrangement might be more widely used.

5.—Most of the people engaged in the building industry will agree that trade generally suffers if work is let below an economic price. It is often stated that the client only gets what he pays for, and whilst this is often the case it is nevertheless difficult to know where to draw a line below which the price is impossibly low. This is a question you gentlemen should be better qualified to answer than I, but I must admit that despite 30 years in the building industry I cannot tell you what is a right or reasonable price for a job or for any unit of work, all rates being effected by site conditions, interpretation of the specification, supervision, access, weather, availability of labour and materials, competence of the builder, method of working, availability of drawings, and so on. All I can say is that if the client expects 20s. worth of work for 10s. he will get what is coming to him.

Pre-planning

6.—This single topic could, with ease, cover a discussion lasting many evenings. It is a vital operation affecting every phase in the industry. It is, on most contracts, stillborn in the early stages, due to the inability of the architect to realise that such pre-planning must of necessity start with the client and himself. Unfortunately, too few architects and trade union leaders realise this.

It is impossible for the contractor (who, after all, is the party controlling most of the spending and from whom one should expect savings) to pre-plan his work and carry it out in an economic fashion if he is without proper detailed drawings and instructions. Without such information he is unable to phase his programme, order his materials to arrive in due time, plan a proper sequence of operations or operate in an economic fashion.

There is no doubt that the lack of any information in the very early stages of the contract causes considerable additional expenditure and it is in this particular sphere that there are the best hopes of achieving a reduction in building costs. I do not think it is too optimistic to suggest that if there is proper co-ordination in all phases (and I emphasise the word "all") that building costs may be reduced by up to 10 per cent. This could probably be best achieved by the extensive use of the scheme whereby the contractor is nominated before the preparation of drawings.

Drastic Changes

So much for the points raised by your committee. I would personally like to see some drastic revision in our present tendering procedure and suggest that this might be done by incorporating the best of both the American and British methods. This, I believe, could be arranged so that, whilst we retain the quantities giving a standard basis for the tender and preventing much unnecessary work at present prevalent in America. bills of quantities should not form part of the contract thereby removing from client and architect the temptation, to which they all appear to succumb, to change their minds every time the builder appears to be getting really into the swing of the job. This would result in better efficiency and production all round and, I believe, ultimately, in the lowering of the present high rate of building costs. My suggested tender procedure would therefore be as follows:—

1. The architect prepares fully detailed plans and specification.

2. The architect or the Royal Institute of British Architects contact the Royal Institution of Chartered Surveyors for the appointment of a quantity surveyor. (This stage has particular significance, as mentioned later.)

3. Tenders are invited from contractors who receive not only the bills of quantities but the full working drawings from which the quantities have been prepared. This should not only simplify the quantity surveyor's task as he can refer to full size details to amplify his descriptions, but would give the contractor a clearer picture of the work which he is pricing and, moreover, should do much to obviate disputes as to the interpretation of the drawings and claims at a later stage.

4. The contractor who is lowest deposits his price and bill of quantities with either the Royal Institution of Chartered Surveyors or the Builders' Federation. He then has the opportunity of checking the quantities (this can either be done by his own staff or, if he wishes, by a firm of chartered surveyors) and gives notice of his agreement to the accuracy in writing, after which the quantities do not form part of the contract and are used only in the case of any proper legal dispute. In other words, my intention is to make it extremely difficult for the client or architect to start work before they are ready or, once they are started, to change their minds.

Fewer Variations

I think that many architects would not issue so many variations if there was no bill of quantities available which enables them with too much ease to substitute one item for another. Whilst on this point, it should be understood that legally, despite any clauses to the contrary in the contract, variations can only be in detail, being such as could be envisaged in the original contract, and that an architect or his client cannot amend a building to such an extent as to alter its character without vitiating the contract.

You will naturally ask what happens about variations, and my answer to that is that there should not be any. That is one of the reasons for the high cost of building. If there are variations, as there may well be in the foundations, it is adjusted, as in America, on a schedule submitted with the priced bill of quantities.

You will notice I have suggested that the quantity surveyor should be appointed by the Institution of Chartered Surveyors; this is to prevent the architect from being in a position to appoint directly his own quantity surveyor for the following reasons:

If, as is the case now, the quantity surveyor is appointed by the architect, the quantity surveyor is dependent upon that particular architect for his living and being, like the rest of us, only human, he is not in such a strong position to insist on complete working drawings before he starts preparation of his quantities. You are all aware of the architect who prevails upon his pet quantity surveyor to take off quantities from sketched plans on the back of a cigarette carton or even less. I think, rightly I hope, that if appointments were made through a suitably organised committee of the Royal Institution, it would be possible to see that quantities were not asked for before proper contract documents and a considerable measure of pre-planning had in fact been carried out. I know this is difficult, but I fear that without some such arrangement we shall never achieve proper pre-planning with its consequential economies.

Under such an arrangement as I have suggested, the savings achieved should be utilised to embark upon further work for which surveyors would have available the staff hitherto used for re-measuring for variation purposes.

From such experience as I personally have had, I think that variations are profitable neither to the client, the builder nor the quantity surveyor, and any arrangement whereby these are reduced should be thoroughly explored.

I realise that my proposals may seem drastic to you, but they really differ very little from those operating in this country to-day, and seek only to achieve comparable outputs to those achieved in America.

DOMESTIC APPLIANCES AND FUEL USAGE

Improving the Efficiency of Space-Heating Discussed in Melchett Lecture

THE coal industry should not leave the responsibility for the design, manufacture, marketing and use of domestic coal appliances so much to the appliance manufacturers and the merchants, but in its own interests should assist to a greater extent, DR. HAROLD HARTLEY, CBE, DSc, told the Institute of Fuel at a meeting in London on October 7, when he delivered the Melchett Lecture for 1953 on the subject of "The Domestic Appliance Industry and Fuel Usage in Great Britain." We take the following extracts from Dr. Hartley's remarks:—

The bulk of the domestic space-heating is done with solid fuel and it has been variously estimated that 98 per cent. of "main" living-rooms are fitted with coal- or coke-burning appliances.

For bedrooms some 25 per cent. of the population appear to depend on gas or electricity for the occasional heating needed.

There is little public appreciation of the advantages of using convected heat. Central heating has found little application in the home, although it is a commonplace in countries with severer climates. Portal houses were provided with closeable solid-fuel fires with an easily controlled rate of burning, giving the advantage of reduced ventilation and the benefit of convected heat. These fires are more efficient than either the old or the modern type of grate, and their reception by the occupants raised hopes that they would sound the knell of the built-in open fire.

Little has been done to make known the advantages of using self-contained appliances giving radiant and convected heat, and progress has been hampered by the national housing policy. A big effort will be needed to break down public inertia and to make people realise that the ideal heating system is really one of which the room occupants are almost unaware. It is not one that has to be the focal point of the family circle and may limit the utility of the living space provided.

It is common knowledge that a substantial amount of heat is transmitted to the chimney by the flue gases passing away from an appliance. Little has been done, however, to estimate the temperature gradients and to take advantage of the fact. The rate of absorption of heat by the chimney is of interest and suggests possibilities for improvement of appliances and of the methods of use.

THE FIREPLACE RECESS

During the Middle Ages, when wood was the primary fuel, the fireplace often consisted of a recess, from the top of which a chimney led into the open air. The fire was built on the floor of the recess or in an open basket and re-radiation of heat from the surrounding walls made a substantial contribution to comfort. The use of coal as the source of domestic heat led ultimately to the modern practice of limiting the space provided for the fire itself, and of adding an ornamental but otherwise useless surround to close up the remainder of the fireplace recess. This restriction of space has seriously limited progress in the design and use of the solid-fuel fire, and has had a bad effect also on the design and use of the gas fire.

By making the fireplace a recess with a well-designed source of heat standing freely in the middle, a substantial improvement in efficiency is attainable without constructional complications. Merely by standing an ordinary gas fire in such a recess the heat output would be increased by 20 per cent. or more in the form of convected heat. Such an arrangement was included in experimental houses designed and built in collaboration with D. E. E. Gibson in Coventry some years ago, and was also demonstrated to a large number of architects in a Midland factory. The provision of fireplace recesses would do much to enable better use to be made of solid fuel and gas for space-heating, and also encourage the early manufacture of self-contained apparatus in which bituminous coal could be burned smokelessly.

FREE-STANDING FIRES

In 1939 A. F. Dufton described a simple form of solid-fuel fire, referred to as an adaptation of the Cheminée de Nancy, which he had made to improve the heating of a living-room. The fire, which was placed in a typical recess, emitted both radiant and convected heat. With it he found the coal consumption could be reduced from 3 lb. to 2 lb. an hour. Recently, J. S. Hales has recommended the use of a similar type of fire but with an adjustable flue restrictor and reduced grate area; the self-contained appliance to be designed for sealing to the top of the firebrick back of an existing built-in fire. The sealing may offer practical difficulties and if this is faulty the appliance will not be effective. The proposal should be given a large-scale trial and every effort should be used to make it a success. The Ridley Committee has endorsed the suggestion.

The use of such fires will act as a palliative, but their cost may be appreciably greater than that of low-cost grates. It will be influenced very much by the public demand, which has yet to be created. Whose is the responsibility to educate the public, and demonstrate to housing authorities the advantages of a change of fireplace design?

Continuing, the speaker said that to use fuel more effectively, a start should be made with the house itself, wherein lies a crux of the problem. The use of heat service equipment is essential, and in building houses this should be recognised.

Houses should not be erected in which the insulation is below the Egerton standard and it should be ensured that there shall not be excessive ventilation.

Attention has been drawn to the desirablity of reinstating the fireplace recess. Where there are flues—and more than one should be fitted to each house—they should permit the use of self-contained appliances.

By providing an equal opportunity for desirable competition, as has been urged by the Ridley Committee and the nationalised industries, better appliances will be made and marketed and improvement of fuel usage will be greatly stimulated. There cannot be adequate competition unless houses are designed so that the occupants can really

choose between solid fuel, gas or electricity for providing any of the heat services needed.

The national resources are being strained to satisfy the demands of various sectional interests for capital equipment, and an increased total annual outlay on new houses may not be permissible. In view of the striking progress that has now been made in overtaking the demand for new houses, would it not be better if the rate of building were reduced by, say, 10 per cent. and more were done to improve the structures themselves?

It would be better also if none of the heat service appliances was included with the house; the ingoing tenant should acquire for himself self-contained equipment which would remain his property.

If these things were done, then a real start could be made to obtain a permanent improvement in fuel use.

TENANTS' FIXTURES

The improvements which have been made in gas- and electricity-consuming apparatus owe much to the fact that the demand is for self-contained equipment. Gas and electrical appliances are complete units, and their satisfactory installation is not dependent on other trades. Poor installation is often responsible for faulty working of built-in solid-fuel appliances.

Self-contained solid-fuel appliances, more efficient in operation, can be made; appliances for heating, cooking and hot-water supply which will allow of smokeless burning with bituminous coal and which will need little stoking and ash removal. They will not be produced economically, if at all, unless there is an adequate market. The technicians are better able to design, and the manufacturers to produce, reliable equipment when it is a complete unit. Further, such apparatus can be installed in a house so that it does not become a landlord's fixture.

Of the 13½ million dwellings in occupation, only about 4 million are owned by, or are in the process of being bought by, the occupants: two-thirds of the householders of the country are tenants. They can be induced to purchase tenants' fixtures and to take a personal interest in the use of appliances. Also, in due course, they would buy replacements when the design has advanced enough to make further expenditure worth while. By increasing the public demand for good equipment, marked improvement in fuel utilisation will follow.

EDUCATION AND SERVICE

Who is to do the preliminary work of educating the public and who is to see to the adoption of more effective apparatus? Appliance manufacturers have built experimental houses and altered old houses to stimulate interest. Their resources are limited and they cannot approach these matters as philanthropists, although in promoting their own interests they can, and do, help the nation. After all, it is only what is good for the nation that can in the long run be good for the appliance manufacturer, so he has every incentive to help progress to the best of his ability.

It is only during the last quarter-century that any of the fuel industries has directly helped the appliance industry to create conditions favourable for progress. In this respect the gas industry went ahead owing to an earlier appreciation of the significance of the fact that its undertakings are public utilities, with a duty to supply not merely a commodity but a service to the public. The domestic demand for gas is maintained because the industry does much to ensure that the service obtained by the consumer shall be good. The electrical industry views its responsibilities in a like manner, and the appliance industry has taken advantage of the co-operation offered by both. The Coal Board, thanks to its scientific advisers, is beginning to play a helpful part, which it is hoped may grow as its experience evolves.

APPROVAL AND MARKETING

The marketing of gas and electrical equipment is guided by the nationalised industries, which buy in bulk. Well over 90 per cent. of the domestic gas appliances for the home market are sold through the showrooms of Area Gas Boards, and their approval of equipment is required before it is offered for sale. Before appliances are accepted by either of these industries they are submitted by the industries themselves to tests agreed in collaboration with the manufacturers. These tests call for high standards of production and performance, and ensure, so far as is humanly possible, the safeguarding of the interests of the consumer. This does not apply to many of the products in which the coal industry is interested.

A few years ago the Ministry of Fuel and Power issued approved lists of solid-fuel equipment for use by local authorities, and in consequence there has resulted some improvement in the design of apparatus. Such control as these approval lists effect applies only to equipment purchased by local authorities, whose interest at present is limited to the new houses. There is little to stop the sale to private individuals of appliances which do not satisfy approved standards.

So long as there is a market for equipment which will not satisfy desirable technical standards, poor apparatus will be offered for sale; and the practice is contagious.

The cheapest-is-best state of affairs existed some years before the last war, and in those days relatively little research work, aimed at improvement in the design of solid-fuel apparatus, was done by manufacturers; or by anyone else for that matter. It would be unfortunate if there were a reversion to those conditions, as inevitably it would result in a complete loss of the valuable domestic market for coal. Domestic consumers spent £187 millions on coal in 1952.

The coal industry should not leave the responsibility for the design, manufacture, marketing and use of domestic coal appliances so much to the appliance manufacturers and the merchants, but in its own interests should assist to a greater extent. No fuel is of use to the householder without satisfactory appliances. It should be a primary concern of the provider of fuel to help to make it possible that only satisfactory equipment will be manufactured, and, as a *sine qua non*, to co-operate with the manufacturers and the merchants to ensure that a market, which is adequate, shall be offered only for use in good equipment.

It is more difficult to design appliances for use with solid fuel than for use with gas or electricity, and yet it is in the solid-fuel sphere that the least has been done to organise the approval on an industrial basis.

Insistence on the adoption of high standards of production and performance for appliances is a necessary preliminary to improvement in the use of coal. Arrangements should be made by the coal industry itself for the testing of equipment, so that matters shall be cleared with the drive and sense of urgency which is essential for any organisation which has to work for a competitive market. Appliances for space-heating, for cooking and for water-heating will need to be handled expeditiously by adequate staffs competent to deal with each section and to cope with the numbers of appliances submitted for approval. It is so important that this work be done by the coal industry itself, which as a result would get into closer touch with realities. It would attain a better appreciation of the potentialities and the limitations of appliances and of their manufacture, and be better able to assess the requirements and the opportunities for the successful use of coal in the domestic field.

THE APPLIANCE INDUSTRY

It is in the interests of the nationalised fuel industries to have an efficient appliance industry, made up of firms which contribute to the fund of technical knowledge and use modern methods of production and control; of organisations appreciative of the need for, and of the steps to be taken to satisfy, high standards of production and performance. When it is ensured that high standards shall be satisfied, only efficient producing and marketing organisations will continue to exist; and efficiency is not determined by size.

The practice followed by the gas industry during the last quarter-century has been effective. With the best will in the world, gas appliance design and production could not have been developed to the extent that has occurred, had the manufacturers not had the wholehearted co-operation of the gas undertakings with whom, by agreement, standards of performance are determined and with whom potential markets are explored.

It would be a mistake to imagine that any particular fuel industry can always best satisfy any one of the heat service needs. To-day these needs are met with appliances developed along certain established lines. To-morrow, as a result of more background and applied research, new ideas will find application in the field. At the present time, for example, the bulk of the space-heating load is carried by the coal industry. If means are found of applying the principles of the heat pump to equipment which can be used in houses, it will have a striking effect on the balance of demand, and the electricity and gas industries might then begin to acquire a large portion of the load. It would be unwise to take any decision which would determine for years to come the direction in which development must take place. It is only by ensuring that the technologists shall have full scope for the use of their intelligence that the best progress will result.

ACCIDENT ON BUILDING SITE

Settlement of £11,000 for Injuries

A SETTLEMENT of £11,000 with costs was agreed at the Birmingham Assizes on Thursday, December 17, in a case in which a Birmingham man claimed damages for injuries received in an accident in 1950.

The plaintiff, Frederick William Bird, of 198, Gilbertstone-road, South Yardley, Birmingham, was awarded the amount against his employers, D. G. Lewis and Company, building contractors, of Acocks Green.

The case arose out of an accident when Bird fell through a roof while working.

LACK OF PLAYGROUNDS ON MODERN ESTATES

Lady Allen of Hurtwood's Strictures

STRONG criticism of the treatment of open space in new housing estates in Greater London was expressed by LADY ALLEN OF HURTWOOD when she commented recently on the essays and designs entered for a competition organised by the Housing Centre to find new ideas for children's playgrounds. Lady Allen was chairman of the assessors for the competition, the others being Mr. J. W. Adams, president of the Institute of Landscape Architects, and county planning officer for Kent; Miss Sylvia Crowe, FILA; Mr. Guy Eagleton, of the National Playing Fields Association; Mr. Gordon Logie, ARIBA; and Mr. L. E. White, liaison officer for Harlow New Town.

"I have recently visited a lot of the new housing development in London," said Lady Allen. "I was impressed by the high standard of the building and by the almost careless handling of the open space, revealing a total disregard of the needs of the families as a whole and of the children in particular." She added that there was a deplorable waste of space, a lack of experience in handling play materials and altogether a waste of opportunity. "These are very hard words, but I believe they are true of London as a whole," said Lady Allen.

As far as she could ascertain, the buildings were designed and erected before any consideration was given to what should be done with the open space. She did not believe this "deplorable state of affairs" would be cured until we could encourage the landscape architect, the architect, the engineer and all those who were important in the provision of the playing needs of children on the estates, to come together at the beginning of the project and continue together until it was completed.

Importance of Aspect

Any one of the plans on view at the Housing Centre would be better than anything one could see in London to-day, she said. Commending the way in which the competitors had approached the task of providing playgrounds, Lady Allen stressed the importance of giving children scope for their imaginative games. She praised the essays in which attempts had been made to provide the children with protection from draughts and rain, while making the maximum use of sunlight. She had visited a housing estate recently where the playground for the under fives was placed on the north of the buildings and, therefore, received practically no sunlight. That estate was designed by an eminent architect.

Among the features of the playground schemes to which Lady Allen drew attention were gossip bays for mothers; concrete tables; seats for the parents; a sandy beach running down to a pool; a miniature theatre; a workshop for the elder children; a store where the tenants could deposit articles which they no longer need but which the children could use in their play; wall blackboards for the children to chalk on; tubular fencing to swing on; a four-roomed playhouse; and a playhouse with climbing facilities on the roof.

In a discussion, MISS CROWE commented that the smaller the space available the more you had to divide up your space. This led to better planning of the space available. MR. WHITE thought the provision of more equipment in children's playgrounds would tend to reduce the amount of destruction that went on in many places. MR. LOGIE said the more "junk" playgrounds we provided the better.

MR. CHADWICK (one of the prizewinners) said he lived in a new town, and there the children's playgrounds were only just being constructed, four years after the new town construction had been started. It was amazing that so much effort was put into the design of housing areas and such fundamental problems as children's play were ignored.

SIR GEORGE PEPLER expressed the opinion that high blocks of flats were not suitable dwellings for small children, but if we had to have them, he thought, we should provide adequate space for the children to play in. We must also impress on housing authorities that playgrounds must be planned at the very beginning of the housing estate.

Lady Allen presented the prizes won in the competition to the following competitors: First, Messrs. A. B. Grove, DipTP (Nottm.), AMTPI, AILA (Coventry), and G. F. Chadwick, MA, BSc, DipTP (Man), AMTPI (Hemel Hempstead); second, Miss Elisabeth Beazley, ARIBA (Hatfield) (Miss Petronella Cundy-Cooper's illustrations). Each competitor was required to submit an essay of not more than 2,000 words, a layout plan and sketches of proposals for a children's playground.

BUILDING WORKERS' WAGE CLAIM

Dangers of Unconstitutional Action by Union Members

AN APPEAL to members to allow proper constitutional trade union procedure to be followed in the submission of the claim by the National Federation of Building Trades Operatives for an increase in wages of 9d. an hour is made by Mr. S. Horsfield, OBE, general secretary of the National Society of Painters, writing in the current issue of his union's journal. Mr. Horsfield states:—

"... our attention has been drawn to the fact that there has been established an organisation of stewards in London which is being linked up throughout the country for the purpose of being used as an outside force so far as wages in the building trade are concerned. I am given to understand that this organisation is collecting funds for the purpose of trying to initiate a stoppage of work just prior to negotiations in connection with wages.

"This body is an entirely unofficial one and is attempting to usurp the functions of the NFBTO.

"On the one hand we have a properly organised policy which will apply to all trades under the instructions of their unions, whereas on the other side we have an unofficial body acting within the Trade Union Movement, without any authority, seeking to act outside the precincts of the trade union policy.

"Our members will readily appreciate that this will create nothing else but chaos.

"There is no need for any other body to step in and attempt to exploit the position nor is there any need for you to give them funds.

"Our members must agree that their interests have been faithfully and properly guarded by our Society and the Federation; therefore, our branches should not let themselves be used to further the ends of this movement, but allow the position to be left in the hands of those most competent to deal with it in a constitutional manner. . . ."

EMBEDDED CEILING PANELS

Research Findings

AS A RESULT of research conducted by the Invisible Panel Warming Association, Grand Buildings, Trafalgar-square, WC2, it has been found that scrim need not be incorporated in the finishing coat of plaster under heating panels provided that (a) The backing is the underside of a solid concrete slab, a hollow pot floor or hollow beams with closed soffit, with good mechanical key equivalent to that provided by slip tiles with dovetail grooves free of slurry, or rubber grooved Keymat or Keyform mats with ribs not more than 1¼ in. apart; (b) the plastering for the whole of the ceiling in the room concerned conforms to IPWA recommendations; and (c) an IPWA inspector is present when the plastering is commenced and is satisfied that the key, quality of materials, gauging and application technique are of the required standard. When scrim is omitted, the cost of plastering is the same as that of ordinary two-coat work.

The following free publications are available from the Association on request:—Panel Heating: Some Practical Applications (Booklet A 7); Heated Ceilings and Comfort (Leaflet A 8); Heating of School Classrooms (Leaflet A 9); Floor Finishes (Booklet FP 1); Plastering (Leaflet FF 50); Pugging and Rendering (Leaflet PR 50); Suspended Ceilings (Leaflet SC 1a); Panels in In-situ Slabs (Leaflet CP 1); Installation of Panels (Leaflet CP 2); Starting up Panel Systems (Leaflet CP 4); Prestressed Plank Floors (Leaflet CP 5); Wood Joist Floors (Leaflet CP 6); Panels in Hollow Beam Floors (Leaflet HB 1).

Wage Calculator

The RH 46 wage calculator produced by "Drivers' World" contains complete wage tables for all workers engaged in the road haulage industry. It also includes time-mileage charts and a transport café directory. Copies are available from the publishers at 9, Billet-lane, Hornchurch, Essex, price 1s. 6d.

Building Sites in Brighton

The Brighton housing committee have reported to the Town Council that on eight sites named it is possible to commence building operations this year (1954) for a total of 1,561 dwellings, and it is recommended to include in the 1954 programme on these sites 700 traditional and 224 non-traditional dwellings. The Borough Engineer and Surveyor states that the 1,052 dwellings in hand as at the end of 1953, together with the programme suggested for 1954 and in addition to sites not mentioned, a total of 2,613 additional dwellings can be provided on sites under consideration.

Hardwood Identification

An atlas for the identification of hardwoods in conjunction with a lens key or by direct comparison with photo-micrographs has been published by the Department of Scientific and Industrial Research, under the title of Forest Product Research Bulletin No. 26, "An Atlas of End-Grain Photomicrographs for the Identification of Hardwoods." It supplements the lens key previously published as Bulletin No. 25, and includes a list of the diagnostic features to be seen on the end-grain, with an index to common and botanical names. Copies are available from the Stationery Office, price 12s. 6d.

INQUIRY BUREAU

Strength of Roof Beams

Q.—The purlin spanning a dormer roof 14 ft. long should consist of two 9 in. by 3 in. members strapped together. In the interests of timber economy, would it be possible, if it was intended to split the dormer into two rooms in the near future, to use a single member measuring 7 in. by 3 in.?

R. C. G.

A.—Using an accepted formula for strength of beams

$$W = \frac{C\,b\,d^2}{6}$$

where b = breadth in inches,
d = depth in inches,
L = length in feet.
W = breaking weight in cwts.
C = weight in cwts, required to fracture a bar one inch square and one foot long. The value of C varying with the type of timber under consideration. For the purpose of this example we will take a mean average of five.

thus for the beam consisting of 2/9 in. by 3 in. span 14 ft. we would have the following results:

$$W = \frac{C\,b\,d^2}{L}$$

$$W = \frac{5 \times 6 \times 9^2}{14}$$

$$W = \frac{5 \times 2 \times 81}{7}$$

$$W = 115\ 5/7 \text{ cwts.}$$

and a beam consisting of 1/7 in. by 3 in. spanned 7 ft. we would have the following results:

$$W = \frac{C\,b\,d^2}{L}$$

$$W = \frac{5 \times 3 \times 7^2}{7}$$

$$W = 5 \times 3 \times 7$$

$$W = 105 \text{ cwts.}$$

It will be seen from these two results that a 7 in. by 3 in. at 7 ft. span is not quite equal to 2/9 in. by 3 in. at 14 ft. span.

Bearing in mind, however, that in the original design a margin of safety was operative and further that the 7 ft. span would be slightly reduced by reason of the distance taken up with the central bearing member, it can be accepted that a 7 in. by 3 in. beam could be used in the manner suggested without any fear of failure.

H. O. D.

Plastering Walls and Ceilings

Q.—I have noted that some sub-contracting plasterers use a number of applications with which I am not too familiar. I would like your opinion on the following:—

(a) Walls, backing: 6 sand, 1 cement, 1 lime. Setting: 1-1½ lime putty, 1 Sirapite wall plaster. Should the backing be dry before setting, or still damp?

(b) Ceilings: Gyproc plaster board. 1 skim coat of Sirapite board neat, followed immediately by a coat of Sirapite wall neat.

(c) Ceilings: Gyproc plaster board. 1 skim coat of Sirapite board neat, followed immediately by a coat of 1 part lime putty, 1 part Sirapite wall plaster.

Do you consider these applications consistent with good practice, or is there a possibility of failure after completion? If so, do you suggest any alternatives? C. F. G.

A.—(a) This is a recognised trade practice and produces very satisfactory results. The floating coat need not be "white dry," but should stand for two days before the finishing coat is applied. The purpose of following this procedure is to allow shrinkage of the backing coat to take place and so avoid cracks or crazing to the finished surface.

(b) This method is followed with very satisfactory results, but it is advisable to form a key on the board to receive the finishing Sirapite. This may be carried out by drawing a bass broom over the board Sirapite before it sets hard. It is important that retarded hemi-hydrate plasters be used on plaster board. It is also important that all joints are stopped, covered with 4-in. scrim and allowed to set before covering the plaster boards with any material.

An alternative to the method indicated for covering the boards is to float with browning plaster and clean sand in the proportion of 1 part browning plaster to 1½ parts sand with an average thickness of ⅜ in. The finishing coat may be retarded hemi-hydrate plaster or Sirapite.

(c) While we have no information of failures with the method indicated, we would advise that a more satisfactory result would be achieved by leaving out the lime putty, using only the Sirapite wall plaster. It should be remembered that in the manufacture of hemi-hydrate retarded plasters there is a percentage of lime already included and the addition of further lime may affect the adhesion. H. O. D.

Liability for Emptying a Septic Tank

Q.—I am hoping that you will be able to give me information on the following subject.

The council have passed a house under the Agricultural Act for the foreman to live in, and have agreed for the subsidy which is granted by the agricultural committee of £15 per year for 40 years; plan and conditions of letting and rent value will also be agreed to.

There is no main drainage, but a septic tank will be constructed to the requirements as laid down by the council; but the point in question on which we would like your advice is that they have made a condition that they shall never be asked to empty the septic tank although there will be a sewer rate paid in full upon this house. I was under the impression that a council could be asked to empty such a tank once a year free; if more often, the owner or tenant to pay for this. W. J. H.

A.—The powers and duties of local authorities with regard to the cleansing of cesspools (which term includes septic tanks) are laid down in sections 72 and 74 of the Public Health Act, 1936.

Section 72 provides that a local authority may, and if required by the Minister shall, undertake among other things the cleansing of cesspools as regards either the whole or part of their district. Where a local authority have resolved, or have been directed, to undertake this service, they cannot, it seems, make a charge for it. (If the occupier of premises wants his cesspool cleansed at more frequent intervals than the authority consider necessary, a charge may be made, but not otherwise.) Where the authority have undertaken this service, the occupier can serve notice on them requiring them to cleanse his cesspool; and if they fail, without reasonable excuse, to do so within seven days, the occupier can sue the authority.

Section 74 provides that where they are under no obligation to cleanse the cesspool, they may do so at the request of the owner or occupier, and charge him for the service.

In these circumstances, I fail to understand the condition said to be made by the council that they shall never be asked to empty the septic tank. I can well appreciate that, if the proposed house is in some remote place, the local authority do not wish to be put to the expense of cleansing the cesspool, but in my opinion it is quite unnecessary for them to try to protect their interests by imposing this particular condition. Moreover, if the condition has been imposed as a requirement of granting consent under the Public Health Act for the cesspool, it would appear to be *ultra vires*.

A. E. T.

Ball-valves on Cisterns and Tanks

Q.—For some time we have been experiencing considerable difficulty with the ball-valves on check cisterns and open tanks. We put in new ones and within a short space of time found that the seatings got pitted so that they are continually overflowing or dripping. The clients are naturally upset and annoyed, and state that it is faulty workmanship.

The water in this district is chlorinated and I am wondering if the chlorination has any effect on the brass seating. If this is correct, do you know of a ball-valve to stand up to this type of water?

W. J. H.

A.—The information supplied is very brief and only sufficient to allow a guess at the actual cause of the trouble. The subject of corrosion is a vast one and often months of investigation are necessary to arrive at the source of the trouble. From experience of similar cases in the past, it is likely to be due to one or two of the following possible sources of trouble:—

(a) Electrolysis brought about by some agent.

(b) The water is of an aggressive nature, which may possibly be aggravated by the addition of chlorine, causing de-zincification of the brass.

(c) Valve with a high percentage of zinc used in its manufacture.

In the first instance it would be advisable to check the whole of the water distribution services for earth connection from electrical apparatus. It is possible for current to find its way to earth by passing through the water system to the ball-valve and finding its way to earth via the main supply. Such a condition might easily result in pitting of the seating when the valve is of the type indicated in (c). It is advisable for all earth connections to be made direct through an earth plate.

Water authorities are in a position to give some indication of the nature of their water, and will usually offer recommendations for the necessary remedial action. If the water authorities are unable to help, or in the case of water being obtained from a private supply, it would be advisable to seek the services of a consulting chemist. A Directory of Independent Consultants in Chemistry and Related Subjects may be obtained on application to the Royal Institute of Chemistry of Great Britain, 30, Russell-square, WC1.

It may be found that gun metal valves, or alternatively, valves constructed to BS 1212 with renewable phosphor bronze seatings, would prove to be the answer to the problem.

H. O. D.

NEWS IN BRIEF

Year Book

The 1953-54 Year Book of the Town Planning Institute can now be obtained from the Institute at 18, Ashley-place, SW1, price 4s.

Planning Booklet

"The Planning of Industrial Location," by Peter Self, BA, which is the third in the series of booklets published by University of London Press, Ltd., on behalf of the Town and Country Planning Association, is concerned with the importance of the location of industry for town and country planning in Britain. The booklet is priced 2s. 6d. net.

Atomic Power Plant

Taylor Woodrow Construction, Ltd., of London, are the building and civil engineering contractors for the thermal reactor from which power from atomic energy will be produced in industrial quantities at Calder Hall, Cumberland. The building construction work, which is under the direction of Sir Charles Mole, Director General of Works, Ministry of Works, began in August, and will take three years to complete. The building is illustrated on page 3.

Four-Storey Garage

Plans rejected in 1951 on grounds of economic difficulties are to be revived by R. S. Pearce and Co., Ltd., proprietors of a service garage in Cornwall-street, Birmingham, which will seek to build, as an extension, a four-storey garage, with express lifts, to house 200 cars. It is claimed that a car park, with reasonable facilities for getting in and out, can accommodate about 40 vehicles per 1,000 square yards, whereas a four-storey garage on the same area could be made to take 250 cars.

PO Wireless Station at Rugby

An extension of the Post Office wireless station at Rugby which will make the station one of the largest and most comprehensive in the world is now under construction by the Ministry of Works. It is being built on the north-east side of Watling-street, opposite the present station which was built in 1924. The new building will comprise three new transmitter halls and other radio equipment rooms, and will operate separately from the present station. It is expected to be ready by the end of 1954 and will house 28 transmitters of the latest type, each being capable of the most modern methods of commercial radio transmission of telephony, telegraphy and still pictures.

Houses for Africans

Modifications in their prototype of a prefabricated house for African natives have been made by Kingston (Architectural Craftsmen), Ltd., Hull, upon the advice of Chief Y. R. Nyakairu, who was visiting the area to study local administration. At home the chief undertook the duties of police chief, housing superintendent and administrative head, and he informed the firm that the African usually had a simple house consisting of living-room, two bedrooms and a guest room, with a passage leading to the outhouse where the cooking took place. Kitchens were unpopular because of the fire risk, and shower rooms were unnecessary because of the scarcity of running water. These modifications have been made, and the house will now have no running water or electricity. It is understood that the simplified house can now be erected in two days.

National Savings

Following a talk on National Savings given 1,000 feet underground, a savings club nas been formed at Oakley Quarries, Blaenau Ffestiniog. National Savings clubs are also operating at the Dinorwic Quarries, Llanberis, where a considerable part of the holiday monev withdrawn was re-invested this year. A savings group has been formed at the Bethseda Penrhyn Quarries.

Mobile Plumbing Workshop

A travelling plumbers' workshop, fitted with up-to-date tackle to deal with almost every plumbing emergency, has been developed by Mr. Cyril Parr, builder and contractor of Pool-street, Walsall. On one side of the workshop—a converted Birmingham ambulance—stands a workbench with a vice, and a wide range of plumbing tools. Stacked in racks beneath the bench are lengths of piping and such "spare parts" as a wash basin and an assortment of taps. A 30-foot sectional aluminium ladder, specially made for the job of climbing on to roofs, lies on the other side of the workshop. With it is carried a folding "cat ladder" to enable the workmen to climb freely about on the tiles.

Institute of Directors Membership

The following directors of firms in the building industry have recently been elected Fellows of the Institute of Directors:—

Thos. R. Blower, M. J. Gleeson (Contractors), Ltd.; J. W. E. Bradley, MC, Burt & Vick, Ltd.; Dr. M. J. Cleary, M. J. Gleeson (Contractors), Ltd.; A. W. Daniels, MIMechE, Holden Engineers (London), Ltd.; John Y. Danks, BSc, MICE, Sir Wm. Arrol & Co., Ltd.; N. Fleming, T. B. Morley & Co., Ltd.; G. R. Fletcher, Fletcher Estates (Harlescott), Ltd.; Donald Fraser, F. Troy & Co., Ltd.; Malcolm J. Grant, Jeffries & Grant, Ltd.; P. S. Green, MC, Davies Bros. (Deebee), Ltd.; N. L. Haine, Haine & Corry, Ltd.; R. Keeble, DSO, MC, TD, G & T. Earle, Ltd.; John H. Lambert, Sir Lindsay Parkinson & Co., Ltd.; W. Lambert, VRD, DL, G. & T. Earle, Ltd.; C. McKechanie, R. Costain & Sons (Liverpool), Ltd.; Lt.-Col. A. Chas. Newman, VC, TD, DL, W. & C. French, Ltd.; George A. Poole, George A. Poole, Ltd.; Thomas Prendergast, Peter Prendergast, Ltd.; H. J. Sheppard, Steel Scaffolding Co., Ltd.; W. B. Taylor, South-Western Stone Co., Ltd.; G. C. Tozer, Terrapin Dwellings, Ltd.; Seth Warren, A. Warren & Sons, Ltd.; G. D. Yates, J. H. Rylance, Ltd.

BOOKS FOR BUILDERS

HOW TO ESTIMATE
By JOHN T. REA

The *new 11th edition* has been brought up to date to September, 1950, with tables giving cost increases for materials and labour for 1936-7, 1939 and 1944-50. Over 680 illustrations. *21s. net (by post 21s. 10d.)*

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NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents:

Wildgoose (Bonsall), Ltd. (525825.) Regd. November 17, bldrs. and contractors, engrs., etc. Nom. cap.: £1,000. Dir.: K. W. Wildgoose, Kendor, Studydr., Bonsall, nr. Matlock, Derby.

Wolverhampton Concrete Co., Ltd. (525829.) Regd. November 17, 57, Darlington-st., Wolverhampton. Nom. cap.: £100. Dir.: G. H. Harris, 129, Wolverhampton-rd., Sedgley, nr. Dudley.

Connell and Finnigan, Ltd. (525841.) Regd. November 18, 44, Molyneux-st., Chorlton-on-Medlock, Manchester 13, demolition contractors, road makers, etc. Nom. cap.: £10,000. Dir.: M. Connell, 18, Colgatecres., Fallowfield, Manchester 14.

F. Sewell & Son (Hull), Ltd. (525842.) Regd. November 18, 96, Church-st., Sutton-on-Hull, bldrs. and contractors. Nom. cap.: £10,000. Dir.: H. Sewell, 88, Church-st., Sutton-on-Hull.

A. S. Green (Ipswich), Ltd. (525885.) Regd. November 19, 6, Bolton-la., Ipswich, Suffolk, bldg. contractor. Nom. cap.: £10,000. Dir.: Martha M. Miller, 33, Dales View-rd., Ipswich.

J. W. Hutton, Ltd. (525904.) Regd. November 19, brickwork contractors, bldrs., etc. Nom. cap.: £500. Dirs.: J. W. Hutton and Minnie F. G. Hutton, 76, Mayday-gdns., SE3.

East Anglian Reed Thatchers, Ltd. (525939.) Regd. November 20, Little Thatch, 37, Lancaster-rd., North Harrow, Middx, thatchers, particularly in relation to reed and straw thatching, etc. Nom. cap.: £100. Dir.: F. A. B. Ford, 21, Chester-rd., Northwood, Middx.

Fuel Processing Installations, Ltd. (525940.) Regd. November 20, 9-11, Copthall-ave., EC2, engrs., mnfrs. of equipment used in fuel processing, etc. Nom. cap.: £100. Dir.: L. T. Judd, Hedge Corner, Shepperton, Middx.

Furniture Finishes, Ltd. (525941.) Regd. November 20, Station Works, Gomshall, Surrey, mnfrs. of paints, varnishes, distempers, etc. Nom. cap.: £1,000. Dirs.: B. H. Baigent and Joan K. Baigent, Little Orchard, Peaslake, Surrey.

General Designers, Ltd. (525942.) Regd. November 20, 1, Vine-st., Uxbridge, Middx., architectural and general designers, engravers, etc. Nom. cap.: £1,000. Dirs.: J. B. N. Wake and T. J. Best, 254, Cowley-rd., Uxbridge, Middx.

Edward Finch & Son, Ltd. (525970.) Regd. November 20, sanitary engrs., and plumbing contractors. Nom. cap.: £5,000. Dirs.: H. Finch and Gladys M. Finch, Claregate, Clifford-st., Wolverhampton.

Blundell & Simpson, Ltd. (526250.) Regd. Nov. 28, 2, Hyde-rd., N1, bldrs. and bldg. contractors, etc. Nom. cap.: £100. Dirs.: C. A. Blundell, 83, Downsrd., Clapton, E5.

Streatham Plastering, Ltd. (526269.) Regd. Nov. 28, plastering contractors, etc. Nom. cap.: £500. Dirs.: Mrs. M. P. Ellis and Doreen E. Ellis, 17, Tooting Bec-gdns., SW16.

Bailey of Blackheath, Ltd. (526277.) Regd. Nov. 28, 76, Westcombe Hill, SE3, bldrs., etc. Nom. cap.: £2,000. Dirs.: Wm. A. Bailey and Wm. A. Hodkinson, 56, Blackheath Park, Blackheath, SE3.

Brosons (Builders), Ltd. (526278.) Regd. Nov. 28. Nom. cap.: £3,000. Dir.: W. J. P. Isaacs, 150, Hetton-rd., Leeds 8.

J. E. Hyde & Co., Ltd. (526298.) Regd. Nov. 30. Baltic House, 27, Leadenhall-st., EC3, to build and manage warehouses, wharves, etc. Nom. cap.: £6,000. Dir.: J. W. Hyde, Cherries, Horley, Surrey.

V. C. Abell, Ltd. (526313.) Regd. Nov. 30, Tudorcourt, 52, Richmond-rd., Worthing, bldrs. and bldg. contractors, etc. Nom. cap.: £2,000. Dir. and ch.: V. C. Abell, Kenwyn, Ringmer-rd., Worthing.

Walton, Moore & Co. (London), Ltd. (526314.) Regd. Nov. 30, mnfrs. of furniture, linoleums, etc. Nom. cap.: £5,000. Sub.: J. W. Peacock, 34, Overhill-rd., Stratton, Cirencester, Glos.

A. V. Cowley, Ltd. (526319.) Regd. Nov. 30, 61, Carey-st., Lincolns Inn, WC2, sawmillers and timber mchts. Nom. cap.: £5,000. Dir.: A. V. Cowley, Broadlands Cottage, Camden Park, Tunbridge Wells.

Fibrous Plastercraft, Ltd. (526324.) Regd. Nov. 30, 3, Newborough-rd., Shirley, nr. Birmingham, mnfrs. of fibrous plaster decorative units, etc. Nom. cap.: £2,000. Dir.: Mrs. M. M. Jennings, 38, Solihull-rd., Shirley, Birmingham.

John Tobin (Builders), Ltd. (526359.) Regd. Dec. 1, 44, Liscard-rd., Wallasey, Ches., bldr. and contractor. Nom. cap.: £2,000. Dir.: J. Tobin, 4, Parkside, Wallasey.

Makwel Joinery, Ltd. (526363.) Regd. Dec. 1, Carlton House, 69, Wigmore-st., W1. Nom. cap.: £1,000. Dir.: J. J. Topping, 45, Abercorn-rd., NW7.

John Cowell & Son, Ltd. (526377.) Regd. Dec. 1, Saw Mills, School-st., Accrington, joiners and bldg. contractors. Nom. cap.: £1,000. Dirs.: H. Cowell and Dorothy Cowell, 70, Pansy-st. North, Accrington.

Southwick Construction Co., Ltd. (526388.) Regd. Dec. 1, 59, Underdown-rd., Southwick, Sussex, bldrs., etc. Nom. cap.: £1,000. Dir.: A. G. Comber, 56, Fairfield-gdns., Portslade-by-Sea, Sussex.

E. Gandy & Son, Ltd. 526411.) Regd. Dec. 2, 7. Gt. Portwood-st., Stockport, plumbers, lead burners and heating engrs., etc. Nom. cap.: £2,000. Dirs.: E. Gandy and Mrs. H. Gandy, 123, Marple-rd., Offerton, Stockport.

National Industrial Fuel Efficiency Service. (526447.) Regd. Dec. 2, Thames House South (Entrance 4, Room 1633), Millbank, SW. Dirs.: To be appointed by British Productivity Council. Sub.: Sir L. M. Hollinghurst, GBE, KCB, 12, Newnham House, Manor Fields, Putney Hill, SW15.

The Builder

CURRENT PRICES OF MATERIALS

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intenton that the details given should indicate fair average prices of materials not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. Due to the exceptional circumstances now prevailing it is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

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		£	s.	d.
Pit Ballast	per yd.	1	1	5
Pit Sand	,,	1	0	5
Washed Sand	,,	1	2	3
¾ in. Shingle	,,		18	11
¾ in. Broken Brick	,,		19	3
Pan Breeze	,,		9	6
Fine or Coarse Foamed Slag Aggregate	per ton	2	18	1
2 yds. of fine and 2.6 yds. of coarse per ton				

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

		£	s.	d.
Best British Portland Cement. Standard Specification delivered Charing Cross area.				
6-ton loads and upwards, site	,,	4	15	0
1 to 6 tons, site	,,	5	4	0
Ferrocrete Rapid Hardening Cement in 6-ton loads and upwards to site	,,	5	3	0
1 to 6 ton do. site	,,	5	12	0
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices				
Red, Buff or Khaki Colorcrete in 6-ton lots ...	,,	6	16	6
Other colours according to colour				
In 4-ton lots from 210s. 3d. to 434s. 3d. per ton.				
White Portland Cement	,,	12	15	3
Under 1 ton	per cwt.		15	6
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	6	7	6
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.				
Cullamix Tyrolean Finish, £9 2s. 9d. to £10 16s. 3d. (1-ton loads and upwards).				
Lightning and Ciment Fondu Brands High Aluminous cement, 6-ton lots and up	,,	14	0	9
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	5	15	0

BRICKS

Full Loads

		£	s.	d.
First Hard Stocks	per 1,000	11	0	6
Second Hard Stocks	,,	10	4	6
Mild Stocks	,,	8	13	6
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.				
2⅝ in. Nominal Fletton Bricks to sites in W.C.				
District Commons	,,	5	10	0
Cellular do.	,,	5	10	0
Keyed do.	,,	5	12	0
Rustics	,,	6	15	0
Cellular Rustics	,,	6	15	0
Single Bullnose do.	,,	6	10	0
Sandfaced	,,	7	10	0
Cortex Facing Bricks	,,	6	5	0
Best Blue Pressed Staffs (London Stations) ...	,,	23	17	6
Do. Bullnose (London Stations)	,,	24	11	6
Blue Wire Cuts (London Stations)	,,	21	10	6
Midhurst Lime Bricks (London Sites)	,,	9	18	0
Uxbridge Whites (London Sites)	,,	8	16	6
2½ in. Best Stourbridge Fire Bricks (London Stations)	,,	22	3	0
3 in. do. (London Stations)	,,	26	11	6
2⅝ in. Machine-made Sandfaced Red Facings (London Sites)	,,	13	9	6
2⅝ in. Machine-made Multi Red Facings (London Sites)	,,	13	14	6
2⅝ in. Hand-made Sandfaced Red Facings (London Sites)	,,	14	3	6
2⅝ in. Hand-made Sandfaced Multi-Colour Facings (London Sites)	,,	14	3	6
2⅝ in. Surrey Clamp Burnt Multi Stock Facings (London Sites)	,,	13	2	0

		£	s.	d.
2⅝ in. Surrey Kiln Burnt Multi Stock Facings (London Sites)	per 1,000	13	18	0
Glazed Bricks (London sites), White, Ivory, Brown—				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0
Second quality — 10% Bests. Cream and Buff £3 extra over White. Other colours, hard glaze. £8 10s. 0d. extra over White.				

PARTITION SLABS, etc.

Delivered Central London Area.

	Minimum lorry loads.		£	s.	d.
Hollow Clay Partition Blocks (Keyed)					
2 in.	140 yds.	per yd. sup.		4	3
2½ in.	140 yds.	,,		4	6
3 in.	120 yds.	,,		5	0
4 in. (6 cavity) ...	95 yds.	,,		6	7
Half blocks at no extra charge.					
Clinker Concrete.					
2 in.	100 yds.	,,		3	6
2½ in.	85 yds.	,,		4	1
3 in.	75 yds.	,,		4	10
4 in.	55 yds.	,,		6	0
Cranham					
2 in.		,,		6	5
2½ in.		,,		7	1
3 in.		,,		8	3
4 in.		,,		10	2
4½ in. Load bearing quality		,,		11	2
Floor Blocks					
3 in. Floor Blocks 12 in. by 12 in. delivered in full lorry-loads		per 1,000	31	10	0
4 in. do.		,,	34	13	0
5 in. do.		,,	39	7	0
6 in. do.		,,	46	16	0
7 in. do.		,,	54	1	0
8 in. do.		,,	61	15	0

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Standard List prices delivered London Area.

	Over 2 tons	Over 100 Pieces under 2 tons	Under 100 Pieces under 2 tons
Best Quality	+67½%	+97½%	+107½%
B.S.S. Best do.	+10% +67½%	+10% +97½%	+10% +107½%
Tested Quality	+37½% +67½%	+37½% +97½%	+37½% +107½%
B.S.S. Tested do.	+47½% +67½%	+47½% +97½%	+47½% +107½%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	9	19	0
4 in. do.	,,	13	1	0

STONE

		£	s.	d.
Bath Stone—				
Monks Park	per ft. cube		6	8
St. Aldheim Box Ground	,,		7	8
Delivered in railway trucks at South Lambeth B.R. Western Region				
Doulting Stone Random Blocks. Delivered London area	,,		7	5
Beer Stone. Delivered London area	,,		7	0
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		7	5
Hopton-Wood Stone—				
F.O.R. Quarries, Wirksworth, Derbyshire—				
¾ in. Slabs for wall lining, sawn two sides in random sizes up to 5 ft. and not over 15 ft. super in area	per ft. sup.		6	2
1¼ in. Slabs for paving, sawn two sides as above described	,,		8	6
Yorkshire Stone—Blue Robin Hood Quality.				
Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stooled cills	per ft. cube		3	1	9
12 in. × 6 in. do. do.	,,		2	4	3
12 in. × 3 in. Plain coping, twice throated ...	,,		1	14	0
12 in. × 3 in. Weathered and twice throated coping	,,		2	5	6
14 in. × 6 in. do. do.	,,		2	1	0
4½ in. × 9 in. Plinth, rubbed on top and face ...	,,		1	16	9
3 in. sawn two sides Slabs, random sizes ...	per ft. sup.			6	6

STONE—*continued*

		£	s.	d.
Templates and Cover Stones, 3 in., 4 in, and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	2	6
Do. do. fair one edge for fair faced brickwork		1	6	9
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		7	10
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	2	0
12 in. × 6 in. Plain Steps, rubbed top and front ...	,,	1	16	9
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		7	6
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	2	11	9

TILES and PANTILES

Delivered London area by road in 6 tons or over per 1,000			
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	28	18	6
Hand-made Pantiles Berkshire district	41	18	6
Hand-made Double Roman Bridgwater district ...	56	17	6
Hand-made 10½ × 6½ tiles Berkshire district	12	15	6
Machine-made 10½ × 6½ Staffordshire district	13	5	0
Hand-made Hip and Valley tiles per doz. ...	1	8	6
Machine-made Hip and Valley tiles do.	1	6	3
Concrete tiles 10½ × 6½	6	18	6
do. Interlocking (49S)	18	9	6

NOTE.—Breakage in transit, purchasers' responsibility

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.			
24 × 12	100	16	9
22 × 12	86	6	6
22 × 11	78	0	6
20 × 12	73	3	3
20 × 10	68	10	9
18 × 10	50	17	0
18 × 9	43	15	0
16 × 10	42	18	3
16 × 8	33	13	3

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

Softwood—							
Joinery quality	Ex. Wharf	per standard		£105 to £125		
Carcassing quality	do.	,,		£90 to £100		
1 in. Tongued and Grooved Flooring	do.	,,		£106	0	0
Hardwood—							
Mahogany—	African S.E.	...	do.	per ft. cube	1	5	0
do.	Honduras do.	...	do.	,,	2	15	0
Oak	European do.	...	do.	,,	1	17	6
do.	Japanese do.	...	do.	,,	1	15	0
do.	English Logs sawn		do.	,,	1	5	0
Teak	8 in. average S.E.		do.	,,	3	0	0
Walnut	African Logs sawn		do.	,,	1	1	0

DOORS (in Lots I-11)

Delivered London area.			
1¼ in. 4 Horizontal Panel. Pattern 4 in. deal			
2 ft. 0 in. × 6 ft. 6 in.	each	1	12	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	13	0
2 ft. 6 in. × 6 ft. 6 in.	,,	1	14	6
2 ft. 9 in. × 6 ft. 6 in.	,,	1	16	9
2 in. do., but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	10	6
2 ft. 9 in. × 6 ft. 6 in.	,,	2	13	6
2 in. Panel, top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	3	9
2 ft. 9 in. × 6 ft. 6 in.	,,	2	6	6

SUNDRIES

Delivered London area			
1 in. Wood Wool Slabs, 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton) ...	per yd.	5	8
1½ in. do. (67 yds. to 1 ton)	,,	7	4
2 in. do. (52 yds. to 1 ton)	,,	8	11½
2½ in. do. (45 yds. to 1 ton)	,,	10	3
3 in. do. (39 yds. to 1 ton)	,,	11	5½
Quantities under 1 ton add 1d. per ½ in. of thickness.			
½ in. imported Insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
¼ in. Hardboard do.	,,	2	3	6
⅜ in. do. do.	,,	3	2	6
⅛ in. Asbestos Flat Building Sheets	per yd. sup.		2	11
Roofing Felt, 1-ply	,,		1	6
do. 2-ply	,,		1	9
Best Scotch Glue, in slabs	per ½ cwt.	5	0	0
do. pearl	,,	5	5	0
Croid Glue	28 lb.	2	5	0
Cut Nails, 3 in. (1-ton lots)	per ton	54	5	0
do. 4 in. and up (1-ton lots)	,,	50	15	0
Wire Nails, 3 in. (4-cwt. lots)	per cwt.	2	15	9
do. 4 in. and up (4-cwt. lots)	,,	2	12	3

METALS

STEEL JOISTS, ETC.

Basis Joists—			
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in. 12 in. × 6 in. plain cut to lengths delivered London area	per ton	37	2	6
Extra for sizes				
3 in. × 1½ in.	,,	3	10	0
3 in. × 3 in., 4 in. × 3 in., 5 in. × 2½ in. ...	,,	1	5	0
4 in. × 1¾ in.	,,	3	0	0
4¾ in. × 1¾ in., 24 in. × 7¼ in.	,,	2	0	0
5 in. × 3 in., 22 in. × 7 in.	,,	1	0	0

		£	s.	d.
6 in. × 3 in.	per ton	1	10	0
9 in. × 7 in.	,,		5	0
10 in. × 4½ in., 12 in. × 5 in.	,,		15	0
5 in. × 4½ in., 6 in. × 4½ in., 7 in. × 3½ in., 7 in. × 4 in., 8 in. × 4 in., 9 in. × 4 in., 10 in. × 5 in., 10 in. × 8 in., 12 in. × 8 in., 13 in. × 5 in., 14 in. × 5½ in., 14 in. × 6 in., 14 in. × 8 in., 15 in. × 5 in., 15 in. × 6 in., 16 in. × 6 in., 16 in. × 8 in., 18 in. × 6 in., 18 in. × 7 in., 18 in. × 8 in., 20 in. × 6½ in., 20 in. × 7½ in.	,,		10	0
Steel angles average price	,,	38	7	6
Steel tees average price	,,	39	7	6
Fabricated work delivered London—				
R.S. Joists cut and fitted	,,	51	15	0
Compound girders	,,	57	0	0
Stanchions	,,	62	0	0
Compound stanchions	,,	65	0	0
In Roof Work—Trusses and Purlins	,,	77	0	0
Average prices not for awkward work.				
Mild Steel Ferro-Concrete bars to BSS785 ex London				
Stock ⅜ in. diam., and upwards	,,	37	1	6
½ in. diam.	per ton extra	3	12	0
⅝ in. do.	,,	2	17	0
¾ in. do.	,,	2	2	0
½ in. do.	,,	1	7	0

MILD STEEL TUBES

Tubes to BSS1387 and Fittings. List prices and following discounts :

Galvanised Tube—	W.I. Fittings	Malleable Fittings
Class A — 3¼%		
Class B + 5¼%	Light +20¼%	Malleable List — 39½%+35%
Class C + 21¼%	Heavy +27¼%	
Black—		
Class A — 23¼%		
Class B — 13¼%	Light + 8½%	Malleable List — 39½%
Class C — 1¼%	Heavy + 16%	

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6-ft. lengths	Gutters	Nozzles	Stop Ends
3 in.	3/1	2/9	/10
3½ in.	3/4½	3/-	/10
4 in.	4/4	3/4	1/2
4½ in.	4/9	3/8	1/5
5 in.	5/4	4/1	1/7

C.I.O.G. GUTTERS

3 in.	4/-	3/7	/11
3½ in.	4/5½	3/7	1/2
4 in.	4/10½	3/8	1/6
4½ in.	5/4	4/4	1/8
5 in.	5/9½	4/11	1/11

C.I. RAIN-WATER PIPES

Per yd. in 6-ft. lengths	Pipe	Bends	Branches
2 in.	6/4	3/4	4/9
2½ in.	6/7	3/8	6/7
3 in.	7/5	4/8	7/1
3½ in.	8/4½	5/7	8/5
4 in.	9/8½	6/9	9/11

L.C.C. COATED SOIL PIPES

2 in.	7/5½	5/9	7/-
2½ in.	7/10½	6/4	8/8
3 in.	8/10	7/-	10/5
3½ in.	9/11	8/8	12/1
4 in.	11/3½	9/9	14/3

Above prices for gutters rain-water and soil pipes for under 3 cwt. lot only. Lots over 3 cwt. see List No. 3200 dated May 1, 1952, plus 7½% and tonnage allowance. 4-ton lots 5 per cent. 2-ton lots 2½ per cent.

L.C.C. COATED DRAIN PIPES

In 9-fts.	cwt.	qr.	lb.	per yd.	Bends	Branches
4 in.	1	1	17	20/1	13/10	24/5
6 in.	2	0	1	29 10	28/10	49/11

ASBESTOS RAIN-WATER PIPES AND FITTINGS

Orders under £30 less 12½ per cent. discount.
Orders over £30 less 17½ per cent. discount.

		2 in.	2½ in.	3 in.	4 in.
Pipes 6/ft. lengths	per yd.	3/6	3/9	4/6	6/-
Shoes	each	2/3	2/6	3/-	4/-
Single Branches ...	,,	3/6	4/3	5/-	7/-
Bends square or obtuse	,,	2/6	2/9	3/6	5/-
Swan Necks 4½ in. proj.	,,	2/9	3/6	4/-	5/6
do. 6 in. do.	,,	3/-	3/6	4/6	6/-

ASBESTOS O.G. GUTTERS AND FITTINGS

		4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths	per yd.	3/3	3/7	4/3	5/2
Drop ends ...	each	2/3	2/4	2/7	3/3
Stop Ends... ...	,,	/9	/10	/11	1/1
Angles and nozzles	,,	2/8	3/1	3/7	4/3
Union Clips ...	,,	1/4	1/7	1/11	2/3

ASBESTOS HALF-ROUND GUTTERS AND FITTINGS

		3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths	per yd.	2/4	2/9	2/10	3/4	4/8
Drop ends ...	each	2/-	2/3	2/6	2/9	4/-
Stop ends ...	,,	/8	/9	/10	/11	1/1
Angles	,,	2/3	2/6	2/9	3/-	4/-
Nozzles	,,	2/-	2/3	2/6	2/9	4/-
Union Clips ...	,,	/11	1/-	1/1	1/3	1/10

METALS—*Continued.*

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	39 10 0
Mild Steel Bars	37 8 0
Mild Steel Hoops	38 3 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft sheets C.R. and C.A.—	
20 gauge	45 12 6
24 gauge	46 17 6
26 gauge	48 17 6
Galvanised Corrugated sheets 6 ft. to 9 ft.—	
20 gauge	52 17 0
24 gauge	54 17 0
26 gauge	57 12 0
Galvanised Flat sheets C.R. and C.A.—	
20 gauge	53 17 0
24 gauge	55 17 0
26 gauge	58 12 0

Metal Windows.—Standard Metal Windows, B.S. 940. Prices on application British Metal Window Manufacturers' Association, Ltd.

PLUMBERS' BRASS WORK, COPPER, ZINC, ETC.

Delivered in London area.

All per doz.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
	M.O.H.					
Screwdown bib cocks Crutch head for iron	70/-	104/-				
Toilet bib cocks for iron ...	90/-	129/-				
Screw down stop cocks for iron	60/-	87/-	171/-	294/-	420/-	741/-
do. with two unions for lead	81/-	120/-	213/-	381/-	504/-	1122/-
Double nut boiler screws ...	15/-	21/-	38/-	39/-	54/-	76/-
Heavy Croydon ball valves ...	62/-	141/-	216/-	394/-	558/-	
Plumbers' union brass lead to iron	15/9	19/-	31/6	55/-	67/9	132/-

	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and screws	27/-	33/-	48/-	75/-	96/-	125/-
Brass sleeves		25/-	25/-	45/-	60/-	61/-

	1¼ × 6 lb.	1½ × 6 lb.	2 × 7 lb.	3 × 7 lb.
Lead P. trap with brass cleaning screws	60/-	75/-	120/-	205/-
Lead S. trap do.	72/6	90/-	147/6	265/-

Solder	s. d.
Plumbers' ... ... per lb.	3 0
Tinmen's ... ... ,,	3 7
Blow pipe ... ... ,,	3 9

Copper tubes BSS 659/1944 on the basic price of 26¾d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 3 cwt.

	Extra d.	Total per lb. d.
¼ in. × 19 gauge	11⅝	38⅜
⅜ in. × 19 ,, ...	10½	36⅞
1 in. × 18 ,, ...	8⅜	35⅜
1¼ in. × 18 ,, ...	8½	34⅞
1½ in. × 18 ,, ...	8⅝	34⅞
2 in. × 17 ,, ...	9⅜	36⅜

		£ s. d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras	per ton	286 10 0
Sheet Zinc, 10 gauge, 5 cwt. lots upwards ...	per cwt.	6 13 0
do. 12 gauge do.	,,	6 11 0
Brass tubes basic price, plus gauge and manufacturing extras	per lb.	1 9⅞

LEAD SHEET AND PIPES

Basis selling price in minimum one-ton delivery to one address in London or Home Counties.

		£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	128 10 0
Lead Water Pipe in coils	,,	129 15 0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. dia. ...	,,	131 5 0
do. over 4 in. dia.	,,	133 5 0
Lead Gas or Untinned Compo pipe	,,	131 5 0
Extras over Basis for quantities under 1 ton		
5 cwt. and under 1 ton	per cwt.	2 0
3 cwt. do. 5 cwt.	,,	4 0
1 cwt. do. 3 cwt.	,,	6 0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected £83 15s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

		£ s. d.
Coarse Pink in 1-ton loads and over Delivered on Site	per ton	7 3 3
do. White do. do. ...	,,	7 11 0
Sirapite Coarse do. do. ...	,,	7 6 3
do. Fine do. do. ...	,,	7 14 3
Blue Lias Lime in 6 ton loads	,,	6 5 0
Hydrated Lime do.	,,	5 9 0
Lump Lime do.	,,	4 18 6
White Keen's or Parian Cement in 1-ton loads ...	,,	10 0 9
Pink Keen's or Parian Cement in 1-ton loads ...	,,	9 15 6
Granite Chips in 6-ton loads	,,	2 6 3
Hair	per cwt.	4 17 6
Gypsum Plaster Lath or Base Board ⅜ in. thick 600 yds. and over in one delivery. Delivered site ...	per yd.	2 3
Gypsum Plaster Wall Boards, 3 and 4 ft. wide, 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery Delivered site	,,	2 6

PAINT AND DISTEMPER

Delivered London area		£ s. d.
Ceiling Distemper	per cwt.	1 12 0
Washable Distemper	,,	5 12 0
Gloss Paint	per gal.	2 15 0
Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	3 11 0
LEAD PRODUCTS AND OILS.		
Ground White Lead 5 cwt. casks	per cwt.	7 15 0
1 cwt. kegs	,,	8 2 0
Genuine White Lead Paint, 20 gal. lots in 1 gal. tins	per gal.	2 18 0
Genuine Red Lead, Dry, 1 cwt. keg	per cwt.	6 12 0
Genuine Linseed Oil Putty, 1 cwt. keg	,,	2 9 0
Size XD quality, 28 lb.	per tin	9 0
Raw Linseed Oil (5 gal.) Drums extra	per gal.	13 3
Boiled Linseed Oil (5 gal.) do.	,,	13 8
SUNDRIES		
Turpentine substitute (5 gal.) Drums extra ...	,,	5 6½
do. do. (40 gal. drum) do. ...	,,	4 9
Solignum, Brown (5 gal. cans), Exterior ...	,,	6 6
Creosote (40 gal. barrels)	,,	2 0
Paste Powder (1 lb. packets)	per lb.	1 6
White Lining Paper	per piece	1 4

VARNISHES, etc.

Delivered London area.		£ s. d.
Oak Varnish, Outside or Inside	per gal.	1 12 6
Oak Pale Copal do.	,,	1 15 0
Hard Drying Oak for Inside	,,	1 17 6
Crystal Paper Varnish do.	,,	1 15 0
Eggshell Flat Varnish do.	,,	2 2 6
Finest Carriage Varnish	,,	2 10 0
Front Door Varnish	,,	1 17 6
Japan Gold Size	,,	1 10 0
Black Japan	,,	1 5 0
Brunswick Black	,,	1 0 0
Berlin Black	,,	1 5 0
Terebene	,,	1 5 0
Knotting (1 gal. bottles free)	,,	2 0 0
French and Brush Polish (do.)	,,	1 13 0

GLASS

Delivered London area.

	Per ft. super s. d.
18 oz. Sheet Glass, Ordinary Glazing Quality. Cut Sizes	5½
24 oz. ,, ,, ,, ,, ,, ,, ,, ...	7½
26 oz. ,, ,, ,, ,, ,, ,, ,, ...	9½
32 oz. ,, ,, ,, ,, ,, ,, ,, ...	1 0
⅛ in. Rolled Plate	9
3/16 in. and ¼ in. Rough Cast	1 0
⅛ in. Figured Rolled and Cathedral, Standard patterns : White	9
do. Standard Tints	1 4½
do. Special Tints	2 9
⅛ in. Cross Flexon, Pinstripe, Hammerstripe, Reedled, Reedlyte and Luminating	1 1
¼ in. Wired Cast	1 2
¼ in. Georgian Wired Cast	1 2½

Hollow Glass Blocks—	Each
P.B.2 5⅞ × 5⅞ × 3⅞ in.	2 9
P.B.3 7⅞ × 7⅞ × 3⅞ in.	4 2
P.B.32 7⅞ × 7⅞ × 3⅞ in.	4 2
Radiused Corner Blocks to match up with—	
P.B.2	5 3
P.B.3	6 9
P.B.32	6 9

¼ in. Polished Plate Glass, G.G. Quality—	Per ft. super
In plates not exceeding 2 ft. sup.	3 7
,, ,, ,, ,, 5 ft. sup.	4 5
,, ,, ,, ,, 45 ft. sup.	5 1
,, ,, ,, ,, 100 ft. sup.	5 6

¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 96 in. high or 160 in. wide. G.G. quality—

Not exceeding 135 ft. sup. or 250 in. one way or 135 in. both ways	8 4
Not exceeding 180 ft. sup., or ditto	11 3
Not exceeding 200 ft. sup., or ditto.	16 0

Plates exceeding 200 ft. sup., prices on application.

Substances other than ¼ in. Polished Plate at Special Prices

Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass	Minimum. quantity.	Per ft. super. s. d.
18 oz. sheet O.Q.	3,000	4
24 oz. ,, ,, ...	2,000	5½
26 oz. ,, ,, ...	2,000	7½
32 oz. ,, ,, ...	2,000	9½
⅛ in. Rolled Plate	1,000	7½
⅛ in. Figured Rolled and Cathedral Standard Patterns, White	1,000	7½
⅛ in. Cross Flexon, Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte	1,000	10½
3/16 in. and ¼ in. Rolled Plate or Rough Cast ...	2,000	10½
¼ in. Wired Cast, Hexagonal	2,000	1 0½
¼ in. Georgian Wired Cast	2,000	1 0½

The Builder

CURRENT RATES OF WAGES

AS FROM FEBRUARY 2, 1953. **(Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)**

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification.	A	A1	A2	A3
Craftsmen	3/6½	3/6	3/5½	3/5
Labourers	3/1	3/0½	3/0	2/11½

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A2
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone R.D. (parts of)	A
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A2
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A
Barnoldswick U.D.	A1
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A2)	A
Basingstoke	A1
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A2
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A
Berrington	A1
Berwick District	A
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A
Billing	A
Billingham U.D.	A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U.D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A1
Breconshire, County of...	‡A2
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A2
Burnham-on-Crouch	A2
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A1
Buxton	A
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A2
Carlisle	A
Carmarthenshire, Cnty of	‡A2
Carnarvonshire, Cnty. of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippen-ham Within and Harden-huish	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A2
Doncaster C.B.	A
Dorking	A
Dorset, County of (except-ing Poole, Swanage and Wimborne A)	A2
Dover	A2
Dovercourt	A
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A2
Epping	A
Exeter	A
Fakenham	A2
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough U.D.	A
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A
Gravesend	A
Great Yarmouth	A
Grimsby C.B. & R.D.(part)	A
Grimsby R.D. (remainder)	A2
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate	A
Hartlepool	A
Harwich	A
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of...	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A2
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A1
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M. B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A1
Letchworth	A1
Lewes	A2
Lichfield M.B.	A
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	§A1
Lowestoft	A
Loxton	A2
Luton	A
Lyneham (Devon)	A2
Macclesfield	A
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A1
Malvern U.D.	A1
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A2
Margate	A2
Market Harborough U.D.	A
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A2
Melton Mowbray U.D.	A1
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A
Milford Haven	A1
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
,, Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A2
Ramsgate	A2
Rayleigh	A
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A
Saxmundham	A2
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A
Sleaford U.D.	A2
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A1
Stratford-on-Avon M.B.	§A
Sunderland District	A
Sunningdale	A1
Sutton Coldfield M.B.	A
Swaffham	A2
Swanage	A1
Swansea	A
Swindon	A1
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A2
Thorpe Bay	A
Thurrock U.D.C. Area	A
,, North of, to Billericay	A
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wel's	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington U.D.	A
Wells (Norfolk)	A2
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A1
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A
Widnes	A
Wigan	A
Wigton	A2
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A1
Windermere	A3
Windsor and Eton	A1
Wisbech	A2
Witham	A1
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A2
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A2
York	A

* For Birkenhead, Liverpool and London the rates are:—Craftsmen, 3s. 8d.; Labourers, 3s. 2½d. In the case of London the rate beyond the 12-mile radius is:—Craftsmen, 3s. 7½d. Labourers, 3s 2d. † Plus 2d. per working day. ‡ This is the County rate and applies except where higher grades are stated. § Regraded as from October 5, 1953.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is **2s. 7d. per hour.** Women introduced to carry out work other than craft processes, 2s. 3d. per hour.

For Building Trade Wages in Scotland see page 36

OVERSEAS BUILDING

Colombo Plan Countries

†*Burma.*—The Government of Burma is considering a development programme which aims at increasing Burma's gross national product from £322.35 m. in 1952-53 to £525 m. in 1959-60. It would involve an investment of £562.6, m., of which about £225 m. would be spent on irrigation, transport, communications, electric power, mining and industry, and the rest on agriculture, housing, health and welfare.

†*Cambodia and Laos.*—Cambodia has no co-ordinated development programme but it is carrying out a number of projects in agriculture, transport and social services, which are calculated to give quick results, and work has started on a similar programme of flood-control, irrigation and drainage. Laos contemplates giving priority to increasing agricultural production and to improving road and river transport.

†*Ceylon.*—Following the visit of an International Bank Mission, the Ceylon Government has established a Cabinet Planning Committee and a Planning Secretariat and has decided to formulate a £112.5 m. development plan. In the field of industrial development the Government's plywood factory has been reorganised and work is well in hand on vegetable oil, paper, caustic soda and DDT, and on ceramic factories.

†*India.*—India has a five-year plan which now envisages an outlay of £1,552 m. in the period 1951-56, of which agriculture, irrigation and power will claim over one-third, and transport and communications nearly one-third. On the basis of this plan, outlay for the public sector for the six years of the Colombo Plan is now estimated at £1,983 m. In the field of community development, a total of 30,000 villages were included by October, 1953, and the programme is being widened to provide a comprehensive national extension service to a large part of the country. In fact, it is envisaged that by 1955-56 nearly one-quarter of the total rural population of India will have come under the scope of this community development programme.

†*Indonesia.*—Indonesia became a member of the Colombo Plan in 1953. Since independence it has been faced with the need to repair the devastation of war and with an internal security problem. It has no development programme—a Planning Bureau has been set up to prepare one—but certain development activity is going forward. During the last few years nearly one million miles of irrigation canals have been reconstructed and a start has been made on the South Borneo drainage plan involving an area of 500,000 acres.

†*Malaya and British Borneo.*—Apart from revisions of estimates to take account of higher labour and material costs, there has been little important change in the development plans of Singapore, North Borneo and Sarawak. But the Federation of Malaya has included in its estimates of development expenditure the cost of resettling, in new villages, those parts of the community most exposed to Communist terrorism. In Singapore a new power station with a capacity of 50,000 kw. was brought into operation and substantial progress was made with the new international airport and with housing schemes. In North Borneo, irrigation, communications, electricity and housing schemes were under way, and in Sarawak progress was made with improving roads, air transport and telecommunications.

†*Nepal.*—A livestock development farm has been established and plans are being made for a dairy farm. A village development scheme has been inaugurated. Minor irrigation projects to irrigate 16,000 acres are expected to be completed in 1954.

†*Pakistan.*—The six-year development plan and two-year priority programme are being reviewed by a new Planning Board, and priority is to be given to projects which promise a quick increase in the production of food or other essential commodities. Expenditure on development has been rising steadily from £31 m. in 1951-52 to an estimated £61 m. in 1953-54 and is already showing results. Woollen manufacturing capacity has been created, sugar milling capacity has been increased from 51,000 to 92,000 tons, and a fertiliser plant is being built with an annual capacity of 50,000 tons of ammonium sulphate, satisfactory progress has also been made with various multi-purpose and irrigation schemes such as the Thal and Lower Sind Barrage projects to mention only two.

†*From the second annual report on the Colombo Plan published by the Central Office of Information.*

Coronation Souvenir

Lighting the interior of Westminster Abbey for the Coronation ceremony involved many special problems, and the way in which these were overcome has been recorded in an attractively illustrated souvenir booklet published by Holophane, Ltd., Elverton-street, Westminster, SW1. A short background history of the Abbey and the Coronation are also given, with scenes from the actual ceremony. A limited number of copies are available from the publishers.

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TRADE NEWS

Aluminium Paint

An aluminium paint comprised of both aluminium and latex, together with other carrying agents, is being placed on the market by the Adelaide Engineering Co., of Liverpool. It can be applied direct to metal, wood, cement, asbestos, stone and slate, and is understood to be applicable over adherent rust, mill scale and paint as well as being a repellant to dry rot, wood worm and fungus.

Heating the Home

A small booklet entitled "Warmth in Your Home" has been produced by Rowe Bros. and Co., Ltd., 10, Dover-street, W1. It sets out for the guidance of householders details of a wide range of modern domestic heating appliances, with information about their correct installation and use. All types of solid fuel burners, including open fires, stoves, boilers and cookers, are dealt with and there is a section on the use of insulating material for roof spaces and hot water tanks. The booklet is issued under the seal of the Authorised Solid Fuel Appliances Service of the Coal Utilisation Council.

Friction Hinge

A friction hinge for windows which is controlled by a bolt with patent washer is being produced by Clement Brothers (Haslemere), Ltd. The fitted window is understood to be moved easily to any required position by a touch of the hand, and the absence of any bracket to lessen effort and do away with external interference. As a safeguard against burglarious entrance it is impossible to separate the hinge from the frame when the window is closed, even if the nut and bolt are removed. This friction hinge is now standard on all "Clembro" windows and side-handle opening ventilators.

Smoke Hoods

Among the larger users of special asbestos-cement pieces are British Railways, who use the Kentish product known as "Urastone" for giant hoods to take away the smoke from locomotive sheds. Recently, as part of their reconstruction programme, British Railways placed with Cellactite and British Uralite, Ltd., orders for 640 such smoke hoods each about 12 ft. by 9 ft. 6 in. by 3 ft., possibly the largest asbestos-cement units of this type. The transport of these smoke hoods from the firm's Kent factory to the engine sheds called for some 10 to 12 trains, each of 30 special wagons. The first of these left on December 5 for Sunderland.

Hand Surfacer

The planing of all materials up to craftsman standards by an unskilled user is understood to be attainable by means of the "Surform" hand-surfacing tool recently developed by Simmonds Aerocessories, Ltd., Treforest, Pontypridd, Glamorgan, in association with Firth Brown Tools, Ltd. The risk of clogging is eliminated by means of a carbon steel cutting strip with 500 separate blades each with a 35 degrees cutting angle, and 500 perforations through which all cuttings pass. The cutting strip gives a controlled depth of cut, and files, forms, spokeshaves or planes. Two types of "Surform" hand-surfacers are available, and will be distributed through the British Lead Mills, Ltd., Byron House, 7-9, St. James's-street, SW1.

THE SCOTTISH BUILDER

New Town of Glenrothes

THE Glenrothes Development Corporation have intimated further important decisions in connection with the development of the new town of Glenrothes.

Hitherto, the Corporation have concentrated on developing precincts to the east and west of the main Kirkcaldy-Cupar road to the south of the River Leven. After consultation with the Secretary of State for Scotland, the Corporation have entered into negotiations with Messrs. Tullis, Russell and Co., Ltd., Rothes Paper Mills for the purchase of Cadham and with Sir Robert Spencer Nairn, Bt., of Leslie House, Leslie, for the acquisition of part of Leslie House policies adjoining the north bank of the River Leven and part of his lands on the south side of the river to the west of the town centre. It will be recalled that Sir Robert recently gifted Leslie House to the Church of Scotland trustees as an Eventide Home.

These proposals have been intimated to Fife County Council as local authority for classified roads and other public services.

The development at Cadham in its first stages involves the layout of roads and services for 600 houses and the setting aside of sites for schools, shops, churches and other buildings as well as open spaces and other amenities. The western development comprises the erection of 700 houses with other buildings and amenities, in accordance with the Corporation's policy.

There is projected the extension of the new road presently formed to the town centre and giving access to the Auchmuty development of 1,200 houses according to an agreed pattern for classified roads within the designated area of the town. This extension will ultimately link up with the existing Leslie-Cadham highway, a short distance to the east of the Burgh of Leslie. When completed, this road will form a direct route from Leslie through Glenrothes to the Burgh of Markinch and on to Leven, serving both the town centre and the first industrial area of the new town.

Following a recent interview with Lord Home, Minister of State for Scotland, the Corporation are able to advise that the cost of land available for private and commercial developers will be fixed on the current estimate of the District Valuer. As the town develops it is obvious that the value of building plots for industrial and business purposes will increase. For this reason, potential inquirers will find it advantageous to make early application for readily accessible sites. The present house-building programme enables the Corporation to set aside houses for staffs and employees of firms desirous of establishing industries and business undertakings at this important centre of a developing area. Plans for nest factories are presently in the course of preparation for submission to the Department of Health for Scotland for approval.

Sir Alexander Brebner

SIR ALEXANDER BREBNER, CIE, will retire at the end of the year at the age of 70 from the post of Licensing Officer at the Ministry of Works Scottish Headquarters, an appointment which he has held with distinction for the past 11 years.

Sir Alexander Brebner was educated at George Watson's College and Edinburgh University, held various important posts in the public works department of the Government of India from 1906 to 1938, when he retired with the rank of Chief Engineer. He was created a Knight in 1938. From 1940 to 1942 he served in the Chief Divisional Food Office for Scotland, and then at the request of the Ministry of Works became Licensing Officer at the Scottish Headquarters of the Ministry.

Selkirk Development Plan

THE SECRETARY OF STATE has appointed Mr. W. R. Grieve, Advocate, to hold a Public Local Inquiry into the objections which have been lodged against the proposals contained in the County of Selkirk Development Plan.

The inquiry will be held in the County buildings, Selkirk, and will open on February 15 next at 11.30 am.

Planning Diplomas

SIX STUDENTS of the Edinburgh College of Art have received diplomas in Town and Country Planning. Congratulating students at a ceremony within the college MR. ROBERT LYON, principal, spoke of the visit during the session of the inspection committee of the Town Planning Institute. Although they had not yet made their report they had made it clear that they were impressed by the continued high standard of the work. Senior students from abroad came to take the course, and they had had students from South Africa, Canada, and the Lebanon.

MR. A. T. MCINDOE, who trained the students, said that they aimed at quality, and they hoped that those they turned out from year to year from this college were of high quality and able to hold their own outside.

The successful students were John E. Arnott, William J. Blakely, Robert G. R. Brown, Norman M. McKillop, Ian M. T. Samuel and Morris Sirkin.

New Type of Construction

THE Scottish Orlit Co., Ltd., have completed the first examples of a new type of construction at Jamestown in the Vale of Leven. An interesting feature of these new "Scotcon" houses is that they incorporate a floating floor in the first and second storeys, using glass wool insertion between the tongued and grooved flooring and the joists and an air gap of two inches below the joists and ceiling boards. The other main feature is the use of cross-wall structure, again a departure from the original type which this company produced.

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SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from February 2, 1953. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc.

Grade A: Craftsmen, 3s. 6½d.: Labourers, 3s. 1d.

For apprentices, the rates are:

Year.	Percentage of Craftsman's rate.	For week of 44 hours. s.	d.
1st	25	38	11½
2nd	33⅓	51	11½
3rd	50	77	11
4th	66⅔	103	10½
5th	75	116	10½

For female labour, the rates are:

	s.	d.
Operatives on craft operations (at end of probationary period)	3	1
Operatives on labouring operations (at end of probationary period)	2	9½

Town and Country Planning

THE SECRETARY OF STATE has approved, subject to modifications, a further two development plans under the Planning Act of 1947 making a total to date of seven.* The plans approved are for the burghs of Hamilton and Perth, and indicate the most appropriate use of the land in the burghs including the zoning of land for housing, industry, shops, commercial premises and open space and recreational purposes. No public inquiry was held into the Perth Plan since all objections were withdrawn. The approved plans show the modifications and are available for inspection by the public at the respective Town Chambers.

Both plans show a limited amount of redevelopment of the older parts of the towns and the local authorities will now proceed to the next stage of preparing plans showing details of the new pattern of the areas which have already been defined as areas of comprehensive development.

In the case of Hamilton the principle of an inner by-pass is generally acceptable, but it is thought that its alignment should be reconsidered. The proposal to re-align the Glasgow Road has been deleted since its usefulness and practicability has not been justified.

Glasgow Builders' Dinner

NEW METHODS, new ideas and new materials were constantly being proposed in the building trade, said MR. WILLIAM NICOL, BSc, president of the Glasgow Master Wrights' and Builders' Association, speaking at the annual dinner in Glasgow, on December 7, at which there were some 300 guests. Each of these ideas and proposals must be sifted and examined to ensure its lasting efficiency and benefit to the public. He thought that in pre-planning—the detailed organisation and phasing of a build-

*The five development plans previously approved are for the burghs of Clydebank (Central Area), Greenock, Motherwell and Paisley, and for the County of Dunbarton (Vale of Leven Area).

ing operation prior to its commencement—the professions could assist by ensuring that customers were not allowed to keep changing their minds after the work was in hand. It was the builder who in the final reckoning got the bad name of being expensive. He thought better organisation on the site of the workshops could be used to lessen costs; there must also be training of a sufficient number of men who would become the leaders, men who combine the quality of craftsmen and technician. He deplored the too general tendency to put off until tomorrow or the more remote future, instead of dealing with problems in the present time. Joiners had to fight so long against the twin enemies of "Substitutes" and "Licences" that it was a pleasure to see the end of all controls on the supply and use of softwood.

NEW BUILDINGS

Aberdeenshire.—CC has approved a scheme for a children's home, to be erected at the grounds of the Blythswood Eventide Homes at Inverurie. The County Architect is Alexander MacGill, County-bldgs., Union-terr., Aberdeen.

Ayr.—Corporation to have plans prepared for scheme of ten bungalows to be erected at The Manholm and Whittlets housing site. The architect is Thomas O'Brien, MIME, ARIBA, Master of Works Offices, Municipal-bldgs., High-st., Ayr.

Dumbartonshire.—Plans prepared by the architects of John Shepherd & Co., Ltd., 620, South-st., Scotstoun, Glasgow, for the rebuilding of their premises at Scotstoun.

Dunfermline.—Dean of Guild Court have approved plans for 52 houses to be erected by TC on the Aberdour-rd. housing site. A petition for 11 houses at Ladysmill was also successful. The houses are to be erected by A. B. Cant, Ladysmill Joinery Works, Dunfermline. Petitions for a new infants' wing at the proposed Pitcorthie prim. sch., Aberdour-rd., and extension of the Civil Defence Control Centre at Pilmuir-st. were also successful.

Edinburgh.—Plans prepared for alterations and additions, est. at £15,000, which are to be made at The North British Waverley Hotel, Princes-st., for the BR executive. The architect is N. A. Barber (L), Railway Surveyor's Offices, St. Pancras, London, NW.

East Kilbride.—Lanarkshire CC has had sketch plans approved by the Scottish Education Department, for a new Protestant public school, to be erected at an est. cost of £135,000, at Maxwellton. The architect is William Watt (F), County Offices, Albert-st., Motherwell-Wishaw.

Glasgow.—Plans prepared and approved for alterations and additions, by their architects, at 351/353, Sauchiehall-st., for Messrs. Ernest A. Bromberg, 10, Hanover-st., London, W1.

Glasgow.—Plans prepared for alterations and additions at Sauchiehall-st. for the South-West of Scotland Electricity Board. The architect is James Henderson, BSc, 62, Dalziel-dr., Pollockshields, Glasgow.

Isle of Bute.—Plans to be prepared for 38 houses to be erected at the Minister's Brae, Rothesay. The Council Engineer and Architect is Alexander Stephens, Master of Works Offices, Municipal-blds., High-st., Rothesay.

Lanarkshire.—Plans prepared by their own architects for new warehouse, which will be erected at London-rd. on The Belvidere Estate by The Scottish Grain Distillers, Ltd., 162, St. Vincent-st., Glasgow.

Paisley.—Plans in hand for the erection of 188 houses on the Huntershill housing site. The architect is John A. MacGregor, BSc. MICE, Master of Works Offices, The County-sq., Paisley.

Perthshire and Clackmannan.—CC has plans in hand for a new school for 600 pupils, which is to be erected at Coodlyburn, Perth. The architect is Ian A. Moodie (A), County-bldgs., York-pl., Perth.

Super-vision

To save time and ensure that no plant is forgotten when starting a contract, a list of plant is included in the December issue of "Super-vision," the journal of the Surrey Association of Builders' Foremen and Clerks of Works. This enables the contractor to see at a glance the various items necessary for the job. Other articles in the journal include notes on the jointing of stoneware drain pipes, and a specification for painting walls and ceilings previously treated with water paints or washable distempers. "Super-vision," price 6d., is edited by L. J. Ketteringham, Rippledene, Warramill-road, Godalming.

The Builder FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JANUARY 7.

***†Leicestershire CC.**—School at Austey and one at Hinckley Burbage. County A, 123, London-rd., Leicester. Dep. £2 2s. each.

JANUARY 8.

***†Durham CC.**—Adaptations, Hunter House Farm, Seaton Carew. County A, Durham.

***†Ipswich CB.**—Eight houses and 8 flats, Cemetery-rd. (two contracts). BE&S, 19, Tower-st. Dep. £3 3s. each. Tenders by February 11.

JANUARY 9.

***†Essex CC.**—Police station and houses, Hornchurch. County A, Chelmsford.

***Essex CC.**—Erection Sandon County secondary modern school, near Chelmsford, and Broomfield County secondary modern school, near Chelmsford. County A, Chelmsford.

JANUARY 11.

***Wallasey CBC.**—13 flats and 3 maisonettes, Manor-rd./Withens-la. and Withens-la./Urmson-rd. Boro' A. Dep. £1 1s

JANUARY 12.

***†Blackburn CBC.**—Crematorium and chapel, Pleasington cemetery. BE. Dep. £2 2s.

***Portsmouth City C.**—18 flats in Link-rd., Wymering. A. Cogswall & Sons, Prudential-bldgs., Commercial-rd.

JANUARY 14.

***Anglesey CC.**—Erection of new farmhouse and buildings near Brynsiencyn. County A, Shire Hall, Llangefni. Dep. £2 2s.

JANUARY 15.

***†Durham CC.**—Erection of four schools and adaptation of one school. County A, Durham.

***†Isle of Wight CC.**—Primary school in Bettesworth-rd., Ryde. County A, Newport. Dep. £3 3s. Tenders by February 16.

***†Worcestershire CC.**—Primary school, Brandhall estate, Oldbury. County A, 14, Castle-st., Worcester. Dep. £5 5s.

JANUARY 16.

***Chester City C.**—Erection Highfield Junior School, Blacon. City E.

***†Halifax CB.**—Bus station, Crossfield. G. Holden, BE, Crossley-st.

JANUARY 18.

Berkhamstead UDC.—Erection of 22 houses at Durrants estate. R. E. Hulse, LRIBA, MIMunE, E&S, Civic Centre, Berkhamstead. Dep. £2 2s.

***Malvern UDC.**—Reconstruction of conveniences, Winter Gardens. C. C. Judson, S & Water E. Dep. £2 2s.

Peterborough City C.—88 dwellings at Dogsthorpe North estate. City E&S. Dep. £2 2s.

Sheffield City C.—(a) Section 23, 132 dwellings; (b) section 24, 95 dwellings, on the Greenhill estate, scheme 7. City A. Dep. £2.

***Southend-on-Sea CBC.**—26 garages (2 contracts). Boro' A. Dep. £1 each.

JANUARY 20.

***Hornchurch UDC.**—Eleven blocks of four maisonettes, Front-la. site, Cranham. S. Dep. £2 2s.

***Huntingdon CC.**—House for headmaster at Ramsey secondary modern school, and St. Ives secondary modern school. County A, Huntingdon.

Manchester TC.—Erection of Poundswick cty. gram. sch., Wythenshawe. City A, Town Hall. Dep. £1 1s.

***Redditch UDC.**—Alterations and additions to public library and school of Art. E. Buckley, E&S. Dep. £5.

JANUARY 21.

***Glasgow Corp.**—Shops and flats, Ashmore-rd., Merrylee. Architectural and Planning Dept., 20, Trongate, C1.

***Harrow UDC.**—12 flats and 3 garages at "Belmont Lodge" site, London-rd., Stanmore. E&S. Dep. £2.

JANUARY 22.

***Feltham UDC.**—Convenience and shelter, junction of Twickenham-rd. and Bear-rd., Hanworth. E&S. Dep. £2 2s.

JANUARY 25.

***Leatherhead UDC.**—Old people's hostel. E&S. Dep. 10s. 6d.

***Lincoln (Kesteven) CC.**—Erection of Carre's grammar school, Sleaford. County A, Sleaford.

***Lincoln (Kesteven) CC.**—District nurses' houses at five sites. County A, Sleaford.

Wortley RDC.—Erection of 48 flats, 46 houses and 12 bungalows at Lane End, Chapeltown. Husband & Co., consultants, 388, Glossop-rd., Sheffield, 10. Dep. £5 5s.

JANUARY 26.

***Wakefield TC.**—Erection of a sec. bi-lateral school. City E, Town Hall, Wakefield. Dep. £3 3s.

JANUARY 28.

Aysgarth RDC.—Eight houses at Gayle-la., Howes. J. Hartley & Son, architects, Swadford-chbrs., Skipton.

JANUARY 29.

***Martley RDC.**—29 houses, Broadheath. E. J. Turner, 1, The Tything, Worcester. Dep. £2 2s.

JANUARY 30.

***Peterlee Development Corpn.**—144 houses, Acre Rigg. Chief A, Shotton Hall, Castle Eden, Co. Durham. Dep. £2 2s.

FEBRUARY 2.

***Brighton CBC.**—Eight flats, junction Upper and Lower Bevendean-avenues. BE&S, 26-30, Kings-rd. Dep. £2 2s.

Greenwich MB.—Six flats and two maisonettes at 380-394, Woolwich-rd., SE7, and four flats at 22-28, Tuskar-st., SE10. TC, Town Hall, Greenwich High-rd., SE10. Dep. £2 2s.

***Warrington CBC.**—Workshop and laboratory, New Technical College, Long-la. BE&S. Dep. £5 5s.

FEBRUARY 3.

***Croydon CBC.**—Dental centre, Shirley-rd. Chief Education Officer, Katherine-st. Dep. £1.

***Croydon CBC.**—Dining hall and servery, Norbury Manor School. Chief Education Officer, Katherine-st. Dep. £1.

FEBRUARY 4.

***Harrow UDC.**—Additional sanitary and washing accommodation, Roxeth primary school, Roxeth Hill. E&S. Dep. £2.

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FEBRUARY 8.

***Yarmouth CB.**—Erection of the Herman infant and junior school at Gorleston-on-Sea. F. Jackson, ARIBA, Schools Architect, 22, Euston-rd., Great Yarmouth. Dep. £2 2s.

NO DATE.

Jamestown (Dumbarton).—116 houses at Haldane site. Scottish Special Hsg. Assoc., Ltd., 15-21, Palmerston-pl., Edinburgh, 12.

Midlothian CC.—Eight houses at Gorebridge. County A, 32, Palmerston-pl., Edinburgh, 12.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 8.

***†Ipswich CB.**—Exterior painting 1,120 houses, Gainsborough estate. BE&S, 19, Tower-st. Dep. £3 3s. Tenders by February 11.

JANUARY 9.

***†Swansea CBC.** — Heating, etc., Clase primary school, Clase. Boro' A. Dep. £2.

JANUARY 16.

Coulsdon and Purley UDC.—E&S (Materials).

JANUARY 18.

***Brighton CBC.**—Adaptation of electrical thermal storage heaters to new oil-fired boilers, Patcham secondary school. BE&S. 26/30, King's-rd. Dep. £1 1s.

***Hayes & Harlington UDC.**—Annual Contracts 1954/55. E&S.

JANUARY 19.

***Folkestone BC.**—Rubber and cork flooring, Leas Cliff Hall. BE.

Kensington RB.—TC (Materials).

JANUARY 22.

***Feltham UDC.**—External decoration of 937 dwellings. E&S, Lynton House, Hanworth-rd.

JANUARY 25.

Hertford BC.—BE&S (Materials).

JANUARY 26.

***Ormskirk UDC.**—Chain link fencing, posts, etc. E&S.

JANUARY 30.

Middlesex CC.—County E&S (Materials).

ROADS, SEWERAGE AND WATER WORKS

JANUARY 18.

Bedford BC.—Completion of roadworks on the Eastcotts-rd. housing estate and Putnoc-la. private development site. BE&S, Newnham House, Horne-la., Bedford. Dep. £2 2s.

JANUARY 20.

Banbury RDC.—Milcombe sewerage and sewage disposal scheme. E&S, Bodicote House, Banbury. Dep. £2 2s

JANUARY 23.

Calne and Chippenham RDC.—Laying of sewers and pumping main and construction of a pumping station at Biddestone, E, Bewley House, Marshfield-rd., Chippenham, Wilts. Dep. £2 2s.

JANUARY 25.

Halstead RDC.—Sewage treatment works for Earls Colne drainage, contract No. 8. J. Taylor & Sons, engineers, Artillery House, Artillery-row, Westminster, SW1 Dep. £5.

JANUARY 29.

Frome RDC.—Works of water supply, Western Area, Stage 1. A. H. S. Waters, MICE, engineer, 25, Temple-row, Birmingham, 2. Dep. £5 5s

FEBRUARY 12.

Petersfield RDC.—Extension of Liss sewage disposal works. E&S Dep. £5.

GENERAL BUILDING WORK

(LONDON)

Croydon.—HOUSES.—TP permission has been granted to the erection of 5 houses and garages on the sites of Nos. 7, 9, 11, 22 and 24, Ash Tree-way, proposed by C. G. Smith, 11, Brookside-way, Shirley.

Croydon.—YOUTH CENTRE.—Erection of buildings for use as a Youth Centre, proposed by the YWCA, Central Building, Gt. Russell-st., WC1, on the site of No. 110, Thornton-rd., has been given TP consent.

Croydon.—SCHOOLS.—Proposals by the Corporation for the erection of the Lanfranc Secondary School in Mitcham-rd.; the John Newnham School, Farnborough-ave.; and the St. Mary's RC Secondary School in Woburn-rd. have been given TP approval.

Croydon.—HOUSES.—TP permission has been granted to Wates, Ltd., 1258-1260, London-rd., Norbury, SW16, for the erection of 141 houses on a new street off Featherbed-la.

Croydon.—HOUSES.—Proposals have been made by the West Wickham (Kent) Land Development Co., Ltd., 175, Limpsfield-rd., Warlingham, for the erection of 6 houses with garages, or 12 maisonettes, on the land adjacent to "White Lodge," Wickham-rd.

Hendon.—SCHOOLS.—Plans have been prepared by the County A for the proposed four-form entry secondary (mixed) school to be erected on a site at Spur-rd., Edgware. County A is also to prepare detailed preliminary plans of the proposed secondary modern school to be erected on the Mote Mount site.

Hendon.—APPOINTMENT.—BE&S is to appoint L. A. Francis & Sons, Vernon House, Sicilian-ave., WC1, as quantity surveyors in connection with the erection of six flats on the Highfield-rd. housing site.

Hornchurch.—DEVELOPMENT.—Proposals regarding the estate layout of Moor-la. estate, Cranham, to provide for 252 dwelling-houses have been submitted by C. Cook & Ptnrs., Ltd., builders, 9, Fillebrook-ave., Enfield, and granted TP permission.

Hornchurch.—HOUSES.—TP approval has been given to an amended site plan submitted by E. G. Acworth, builder, rear 207, High-st., Waltham Cross, for the erection of 17 dwelling-houses on the sites of Nos. 1-17 on plan, Front-la., Cranham.

Hornchurch.—HOUSES.—The erection of six dwelling-houses on the sites of Nos. 202-212, Benhurst-ave., Elm Park, proposed by H. C. Blake, estate agent, 1, Broadway-par., Elm Park-ave., has been given TP approval.

Hornchurch.—DWELLINGS.—TP approval has been given to proposals by F. C. Holmes, 14, Ashleigh-gdns., Upminster, providing for the erection of five dwellings on the sites of Nos. 93-101, Suttons-la., Hornchurch.

Hornchurch.—HOUSES.—The erection of five dwelling-houses on Nos. 1-5 on plan, Frederick-rd., Rainham, proposed by W. H. Feasey & Sons, Ltd., builders, 295, Eastern-ave., Ilford, has been granted TP permission.

Hornchurch.—DEVELOPMENT.—Proposals by T. Bates & Sons, Ltd., building contractors, Church-rd., Harold Wood, for the erection of 14 dwelling-houses on the sites of Nos. 1-14 on plan, Nelmes-cres., Hornchurch, have been given TP approval.

Hornchurch.—ESTATE LAYOUT.—TP approval has been given to the amended layout of streets on the Harold-court estate, Harold Wood, proposed by W. & J. Weatherhead, Ltd., builders, 124a, North-st., Hornchurch.

Hornchurch.—WAREHOUSE.—The erection of a warehouse in Ferry-la., Rainham, proposed by the Rainham Starch Works, Ltd., has been given TP approval.

Hornchurch. — HOUSES AND BUNGALOWS. — An amended site plan for the erection of 50 dwelling-houses and 79 bungalows on the Oaks estate, Cranham, submitted by the Academy Electric Co. (1931), Ltd., 2, Burges-rd., E6, has been granted TP permission.

Hornchurch.—POLICE HOUSES.—Proposals by the Essex Standing Joint Com. providing for the erection of six police dwelling-houses in Hacton-la. and Alder-ave., Upminster, have been given TP consent.

(PROVINCIAL)

Alfreton.—Alfreton Knitting Mills, Ltd., propose extensions to factory, including new canteen.

Amble.—UDC approved plans for British Legion Club in Percy-st.

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Anglesey.—CC approved revised plans for fire stn. and ambulance stn. at Llangefni (£13,817 and £2,464 est.).

Ashton-under-Lyne.—BC propose erection of 128 houses, 56 flats and 40 aged persons' bungalows in 1954.

Aspull.—UDC received allocation of 24 dwellings for 1954 programme.

Aston Fields (Bromsgrove).—E. R. Hammersley & Co., Ltd., Cradley Heath, have taken over and propose expenditure £30,000 on modernisation of the premises of Harries Whitfield & Co., Ltd.

Barnsley.—EC received Ministry approval for proposed Athersley Sec. Mod. Sch. (£206,039 est.).

Bromsgrove.—RDC approved plans for:—20 houses at Tanyard-la. for Alvechurch and Drewit Self Help Housing Assn.—Alterations at Belbroughton C. of E. Sch. for Worcs. C.C.—Housing development at Crown Meadow, Alvechurch, for Central Area Estates, Ltd.

Bromsgrove.—UDC approved plans for alterations and additions to the "Park Gate Inn," for Dares Brewery, Ltd.

Chesterfield.—TC to sell site at Soresby-st. to Trustees of Soresby-st. Congregational Church for new building.—Approved erection of new licensed premises at Calow-la. for Wm. Stones, Ltd.

Cockermouth.—UDC to invite tenders for erection of flats in Sullart-st. Plans being prepared by Council's S.

Cumberland.—Northern (N and C) Coal Board received permission to proceed with £10,000 welfare scheme for Siddick. Board's Architects' Dept., Ashfield Towers, Gosforth, Northumberland.

Darwen.—TC approved plan for erection of a mortuary at Robin Band.—Rebuilding part of Darwen Paper Mill.—Propose 32 one-bedroomed flats at Lower Wood Bank, 28 at Redvers-rd. and 12 at Snape-st.

Daventry.—TC received approval for 38 houses to be erected on the Brauston-rd. estate.

Dewsbury.—BC propose extensions to Ravensthorpe Council Offices to form branch library.

Durham.—City E, J. W. Green, to prepare outline plans for proposed crematorium in South-rd.

Halesowen.—TC approved erection of factory at Park-la. for Thomas & Yeomans, Ltd., Attwood-st., Stourbridge.

Hartlepool.—Extensions costing £150,000 to be carried out to Pallister Works owned by Steetley Co.

Houghton-le-Spring.—North-Eastern Trading Estates, Ltd., Gateshead, to erect a factory at Fence Houses for N. Hyer, Ltd., clothing manufacturers. Architect, William Holford, 80, Bedford-st., Liverpool 7. Newrick and Blackbell, 58, John-st., Sunderland, preparing plans for converting premises in Newbottle-st. into bank premises for Sunderland Trustees Savings Bank. GPO to construct PO in Newbottle-st. UDC to take steps to acquire 23 acres of land at The Burn, Houghton, for the erection of 220 houses. W. & T. R. Milburn, 17, Fawcett-st., Sunderland, have prepared layout plans for the Rainton-gr. estate. MH and LG has approved the UDC's estimates for 106 houses on the Racecourse estate and 50 on the Barnwell estate.

Hull.—Plans for a new police station to be erected at Queen's-gdns. have been approved in principle by the Watch Committee and will go before a planning sub-committee of the Corporation.

Keighley.—S. Jerome & Sons (Holdings), Ltd., propose extensions at Limefield Mills, Crossflatts, £25,000 est. Licences received and early start to be made.

Leeds.—TC to negotiate with Myton, Ltd., Hull, for 176 dwellings at Tinshill estate, and with W. J. Simms, Sons & Cooke, Ltd., Nottingham, for "Bellrock" houses at Beechwood estate.

Leigh.—TC to propose commencing work in March on bus centre at King-st.

Llandudno.—TC to prepare plans for single-bedroomed flats at Tre-Creuddyn estate

Lytham St. Annes.—TC to invite tenders for erection of 32 single-bedroomed flats.—Approved plans for 9 bungalows at Smithy-la. for F. Hunt (St. Annes), Ltd.—Mullards, Ltd., propose new factory.

Middleton.—BC to invite tenders for 7 shops and 5 maisonettes at Hollins estate.—Approved plans, RC Prim. Sch. at Langley estate for Rt. Rev. The Bishop of Salford, Wardley Hall, Worsley.

Nantwich.—Manchester Reg. Hosp. Board approved in principle erection of pathology laboratory at Barrony Hosp.

Newcastle-on-Tyne.—Factory alterations proposed in Benton-rd. for Pepsi-Cola (Novo Bottlers), Ltd., Newcastle, to plans by R. H. Gallanaugh, 12, Grafton-st., W1.

Newcastle-on-Tyne.—EC expected to start work next June on primary school on Kenton North Estate, cost £91,000. City A, G. Kenyon, 18, Cloth Market.

Newcastle-on-Tyne.—Newcastle Diocesan authorities plan erection of nine new schools. Two of these expected to be commenced in next two years.

Newcastle-under-Lyme.—BC approved plans and estimate of £10,500 for branch library at Clayton.—Approved plans, alterations at 44, High-st., for Henry White, Ltd.—Canteen at Apedale for Effra Sales & Services, Ltd.—Rebuilding and extending warehouse

at Brick Kiln-la., Chesterton, for Mr. W. Newell.—Laboratory and garage at Brampton Hill, The Brampton, for G. H. Downing & Co., Ltd.—Approved layout plans by the Bournville Estate Architect for 40 houses and 8 maisonettes at Bradwell.

Northampton.—Northampton Theatre Guild received approval to plans for adaptation of the King-st. Chapel as a Little Theatre.

Northenden.—Manchester TC propose new residential nursery for 30 children at Longley-la. (£32,520 est.).

Northumberland.—County Roads and Bridges Comm. seek permission to construct bridge over River Allen, cost between £8,000 and £10,000. Plans by County S, County Hall, Newcastle-on-Tyne.

Northumberland.—CC to erect nurses' houses at Broomhill, Scots Gap and Willington Quay. County A, C. C. Brown, County Hall, Newcastle-on-Tyne.

Oldbury.—TC approved outline application for erection of four shops with living accommodation at the corner of Tower-rd. and Wolverhampton-rd.—Approved layout for 13 dwellings and 10 garages between Abbey-crcs. and Wheatley-rd.

Penistone.—West Riding CC appointed Enthoven & Mock, 4, Raymond-bldgs:, Gray's Inn, London, WC1, as architects for extensions to the existing Grammar Sch. (£95,000 est.).

Penrith.—Rev. F. Ward, Wesley Manse, Wordsworth-st., proposes erection of new church hall at Seagill. Architect, A. Knewstubb, St. Andrew's-chbrs., Penrith.

Runcorn.—UDC to erect houses at Windsor-gr. and Penn-la. for tenants dispossessed by the new Runcorn/Widnes Bridge.

Saddleworth.—UDC approved planning application by Greenefild Co-operative Society, Ltd., for erection of houses off Central and Annisfield-avenues, Greenfield.

Salford.—TC approved plans for 3-storey office block and 2-storey factory extension at Chapel-st. and Bank-st. for A. Wardle, Ltd.—Rebuilding of war-damaged vicarage at 92, Fitzwarren-st., for St. Ambrose Church Council.—Single-storey extension to factory at 16/26, Wheathill-st. for Morris Bros. (Wearswell), Ltd.—Three-storey factory extension at Frederick-rd. for Ward & Goldstone, Ltd.—Extension to factory at 313/315, Bury New-rd., for Rainwear De-luxe, Ltd.

EC received starting date (April 1, 1954) for phase 1 of extensions at the Royal Technical College (£282,010 est.). Plans by Lancs. County A, G. Noel Hill, Preston.

Sandbach.—Governors of Sandbash Grammar Sch. proposed extensions to sch. buildings.

Scarborough.—BE, H. V. Overfield, preparing scheme for chapel and crematorium at Woodlands Cemetery.

Scarborough.—Corpn. Harbour Comm. approved in principle £10,750 scheme for construction of ice-manufacturing and storage plant at West Pier. BE, H. V. Overfield, Town Hall, Scarborough.

Scarborough.—Rev. W. E. Cowling proposes new mission, Sunday school and church hall at Tuthill School premises.

South Shields.—TC to let contract for erection of yacht clubhouse at South Marine Park to replace premises destroyed during war. Plans by BE, John Reid.

Staffs.—CC propose new welfare centre at Kingswinford.—Maternity and child welfare centre and school clinic at Clayton, Newcastle. Infant welfare centre at Windmill-la., Tettenhall.—Maternity and child welfare centre and school clinic at Short Heath, Willenhall.—New fire station at Stone-la., Kinver.—New branch library at Church-st., Wednesfield.

Stanley.—UDC to invite tenders for erection of 60 or 70 houses at Catchgate. Plans by S, Council Offices, Stanley, Co. Durham.

Stockport.—BC approved plans, offices at Swallow-st. for Birkett & Bostock, Ltd.; motor showroom and office at Heaton-la. for J. & J. Greig, Ltd.; extensions to works at Priest-st. for J. D. Hughes (Stockport), Ltd.; motor service garage, petrol-filling station and lock-up garages at Edgeley-rd. for Edgeley Garages, Ltd.; new wagon shed at Reddish-rd. for Trustees of the Diocese of Shrewsbury; petrol-filling motor service station and repair garage between Turncroft-la. and Hall-st, for H. E. Harrison, Hall-st. Garage.

Stourbridge.—TC approved plans for new building at Tat Bank-rd. for British Industrial Plastics, Ltd.

Sunderland.—TC has under consideration proposal for development of Roker Blockyard. Work includes erection of cafeteria, conveniences and promenade, etc. BE, J. E. Lewis, 27, Fawcett-st., Sunderland.

Tynemouth.—TC asked Coast Road Joint Comm. to approach M of T to ascertain when work is likely to be commenced on duplication of Coast-rd., which runs from Newcastle to coast.

Wallsend.—EC approved in principle provision of three additional classrooms at St. Peter's C of E School.

Warrington.—TC approved plans, extensions at "The Limes," Orford Green, for Warrington Trades Hall & Labour Club & Institute, Ltd.; extensions to factory at Latchford for British Aluminium Co., Ltd.: store building at Hoyle-st. for C. J. Newton, Ltd.; extensions to factory at Scotland-rd. for Peter Stubs, Ltd.

Washington (Co. Durham).—UDC to negotiate contracts with J. and T. Robson, Springwell, Gateshead, for erection of 50 houses in Oxford-ave., and with Wimpey and Co., Ltd., Orchard House, Newcastle-on-Tyne, for 70 " No Fines " houses on Washington Station site.

Wellingborough.—RDC to negotiate prices for 20 houses at Bozeat, 12 at Irchester, 4 at Earls Barton and 6 each at Orlingbury and Wollaston.

West Bromwich.—BC approved plans, new building at Brickhouse-la. for Steel Parts, Ltd.; canteen and offices at Phœnix-st. for Robinson Bros., Ltd.; new factory at Colliery-rd. for Chloride Batteries, Ltd., Birmingham.

West Hartlepool.—Kingsley & Phillips, Lambton House, Lambton-rd., Newcastle-on-Tyne, to prepare quantities for four-storey maisonettes in connection with TC's central area redevelopment scheme.

Withernsea.—UDC has presented to the Ministry a scheme for the erection of six new groynes and revetment at the south end of the sea front. A report has been received from the consultant engineers recommending that the scheme for the raising of the south sea wall should also be put before the Ministry.

Workington.—BC approved plans, 166 houses at Laverock Hall estate for James Leslie & Son. Coach-rd., Whitehaven. Architect, Jonathan Saul, Workington.—Village hall at McGowan-st., Siddick, for the Trustees of the Siddick Miners' Welfare Scheme per D. McKerchar, Divisional Land Agent, National Coal Board.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Aberdeen.—Corporation to erect 32 houses on the Masbrick housing scheme. Alexander B. Gardner (F), architect, housing offices, Broad-st., Aberdeen. *Tee Bean Structures (Builders), Ltd., Aberdeen, £45,495.

Anglesey.—148 houses at Turkey Shore, for UDC: *John Laing & Son, Ltd., London, £234,496.

Blantyre.—Erection of new library for Lanarkshire CC. William Watt (F), architect, County Offices, Albert-st., Motherwell-Wishaw. Excavation. brick, building and allied works, *A. Wright & Sons (Builders), Ltd., Blantyre, £9,090. Joinery, carpentry and allied works, *The Red Cedar Supply Co., Ltd., Hamilton, £2,753. Bituminous felt roofing and allied works, *Frank B. Price & Co., Ltd., Lanarkshire, £126. Plumbing, sanitary engineering and allied works, *Archibald Low & Sons (Partick), Ltd., Glasgow, £453. Plaster, lathing and allied works, *Lanarkshire Direct Labour Department, Motherwell-Wishaw, £283. Electrical fittings. installation and allied works, *William Brady, Ltd., Bellshill, £488. Heating Engineering installation and allied works, *Lanarkshire Direct Labour (Heating Engineering) Department, Motherwell-Wishaw, £881. Roughcasting and allied works, *Lanarkshire Direct Labour Department, Motherwell-Wishaw, £153.

Bootle.—23 houses and 8 flats at Netherton estate, for BC: *Direct labour, £50,040. 42 houses: *H. Bevan (Builder), Ltd., 30, Desmond-st., Liverpool 5, £55,058.

Bridgenorth.—65 houses at Grove site, for TC: *Wm. Sharratt, Ltd., Wolverhampton.

Bromsgrove.—Houses, for RDC: 8 at Walls-rd., Stoke Prior: *Hall Green Builders, Ltd., £11,424.

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Further 20 houses at Charford estate, for UDC: *S. J. Smith & Co., Ltd., £26,947. A price to be negotiated with Mackee & Rodway, Ltd., Northway, for 30 houses at the same estate.

Carlisle.—Reconstruction of Lowther-st., for City C. City E, L. J. A. Stow, 18, Fisher-st., Carlisle: *Border Engineering Contractors, Ltd., Queen-st., Whitehaven, £23,215.

Carlton.—Two shops with living accommodation at Valley-rd., for UDC: *Loach Bros., Rectory-rd., Old Colwick, Notts, £5,927.

Dewsbury.—Houses, for BC: 148 at Church-la./School-la. site: *Fell Construction Co., Ltd., Filey, £187,012. 122 at Wakefield-rd. No. 3 site: *Harlow & Milner, Ltd., Warren Yard, Warrengate, Dewsbury, £155,337.

Failsworth.—Extensions to telephone exchange at Oldham-rd.: *W. Fearnley & Sons (Salford), Ltd., Eccles New rd., Salford.

Glasgow.—Corporation has had plans prepared for new Police Station and other offices, to be erected at Barrhead-rd. James MacMillan Riddet (F), architect, Master of Works Offices, Municipal-bldgs., Georgesq., Glasgow. *Robert W. Stewart & Co., Ltd., St. Enochs-sq., Glasgow, £39,374.

Glasgow.—Supporting works at the new prim. sch., Eastbank-st., Grenfauld, £12,852. John MacNab (F), Education Architect, 129, Bath-st., Glasgow. *The Cementation Co., Ltd., Glasgow.

Glasgow.—Plans prepared for reconstruction and additions scheme for workshops, showrooms and offices at India-st. *Sinclair's Engineering Co., Ltd., 19, India-st., Glasgow.

Glendale.—Conversion of premises at Wooler into offices, for RDC. Surveyor, A. R. Field: *G. Cowan. Wooler, £7,196.

Greenock.—Plans prepared for third section of Larkfield Number 3 scheme. Robert L. Rankine, AMTPI, AMInstCE, architect, Master of Works Offices, Municipal-bldgs., Hamilton-st., Greenock. *Blackburn (Dumbarton), Ltd., Dumbarton.

Keswick.—Erection of 41 houses on the Latrigg-cl. estate, for UDC. Plans by the Surveyor: *John Twiname, Ltd., Brigham, Cockermouth.

¶**London (Air Ministry).**—Contracts to value of £500 or over for week ended December 19:

Painting work: Renovators (Provincial), Ltd., 67/68, Carver-st., Birmingham; Wm. Herd & Co., Ltd., Batemans-row, London, EC2; N. Harris & Sons, Ltd., Ripple-rd., Dagenham, Essex; J. H. Woodward (Contractors), Ltd., Rosefield-st., Leamington Spa; Wason Bros., Ltd., Sussex-st., Grange, Cardiff; C. A. Hayes & Sons (Painting), Ltd., Stork House, Hotwells, Bristol 8. *Resurfacing work*: Wm. Brigg & Sons, Ltd., East Camperdown-st., Dundee; The General Asphalte Co., Ltd., Grafton-rd., London, NW5; Geo. Wimpey & Co., Ltd., Hammersmith Bridge-rd., London, W6; Wirksworth Quarries, Ltd., Bank House, 286, Pentonville-rd., London, N1. *General maintenance work*: C. Moyser & Son, Martins Bank-chbrs., 21, Baxter Gate, Doncaster; Kettlewell, Son & Co., Ltd., 11/13, Colonial-st., Hull.

London (Metropolitan Police).—Contracts placed by Metropolitan Police:—

Internal repairs and redecorations at McCready House, *J. Poore & Sons, £1,035. Internal redecorations at 144/166, Colinsdale-ave., Hendon, *Druce & Co., £931. Internal redecorations at Peel-dr., Aerodrome-rd., NW9, *Druce & Co., £1,083. Erection of 6 flats at 37-47, Sigdon-rd., Hackney, E8, *Kind & Co. (Builders), Ltd., £15,440.

¶**London (MOW).**—Contracts placed by MOW during week ended December 12:

London: National Gallery, remodelling rooms 19 and 20, Galbraith Bros., Ltd., Crayford Bridge, Crayford, Kent; 34, 35 and 36, Chesham-pl., SW1, external painting and repairs, Mullen & Lumsden, Ltd., 41, Eagle-st., Holborn, London, WC1; MOW Stores, 175, North Circular-rd., NW10, internal painting of 34 Romney huts, J. W. Green (Painters), Ltd., 171, Graham-rd., Wimbledon, SW19; West India Dock, South, erection of Customs house, No. 62, William Willett, Ltd., Sloane-sq., SW1; " B " Jetty, Royal Victoria Dock, erection of Customs house, No. 15, William Willett, Ltd., Sloane-sq., SW1.

Kent: Southern House, Dover, alterations, repairs and decorations, R. J. Barwick, Market-st., Dover. *Monmouthshire*: M/L Drill Hall, Ebbw Vale, rebuilding retaining wall, G. Albert Brown (Bldrs.), Ltd., " Westways," Fairview, Ebbw Vale, Mon.

Middlesbrough.—Erection of police substation at Thorntree, for TC. BE, J. A. Kenyon: *Direct labour.

Newcastle-under-Lyme.—Erection of shops and flats at Windermere-rd., for BC; *Joseph Jones (Newcastle), Ltd., £24,986.

Northwich.—20 houses at Rudheath and Shurlach estate, for UDC: *Scott & Clarke, Northwich, £20,793.

Roxburghshire.—Erection of 14 houses at Hawick. George Bell, Council Architect, Master of Works Offices, Hawick. Excavation, brick, building and allied works, *James Crow & Son, £7,266. Slating and allied works, *James Gibb, Galashiels, £168. Roughcasting and allied works, *Peter Kelly & Sons, Ltd., Edinburgh, £346. Joinery, carpentry and allied works, *Cook & Douglas, Ltd., Hawick, £4,731. Plaster, lathing and allied works, *J. & J. Elliot, Ltd., £1,615. Glazing and allied works, *J. Gibb, Galashiels, £75. Plumbing, sanitary engineering and allied works, *Murdoch & Gardner, Ltd., Hawick,

£2,204. Electricity fittings installation and allied works, *Miller & Tait, Ltd., £414.

Seaham.—Construction of 13 groynes to prevent coast erosion, for UDC. Consulting engineers, Lewis & Duvivier, Grosvenor-gdns., London, SW1: *R. Robinson & Co., 41, Parliament-st., London, WI, £24,800. (Extension of existing contract for building new sea-wall.)

Stanley (Co. Durham).—Conversion of Beamish Hall into head offices for No. 5 area of the Durham Coal Board, Willington. Plans by the Board's own staff: *Direct labour (work will begin in New Year).

Stockport.—Extensions at York House, for BC: *Thos. Davies & Sons, Stockport, £7,443.

Wallsend.—Work is in hand on the construction of garage and headquarters in Cedar-gr., for the Northumberland Territorial Association. Architects, Cackett, Burns Dick & Mackellar, 21, Ellison-pl., Newcastle-on-Tyne: *Wilson (Engineering Contractors), Ltd., 44, Dean-st., Newcastle-on-Tyne.

Whitefield.—Extensions to telephone exchange: *J. Gerrard & Sons, Ltd., Swinton, nr. Manchester.

Uses of Hardwoods

Digest No. 59, recently issued by the Building Research Station, is entitled "The Uses of Hardwoods in Building," and, apart from notes on some of the more important hardwoods, classifies the various hardwoods suitable for particular purposes. Copies obtainable at the Stationery Office, price 3d.

Higher Technology

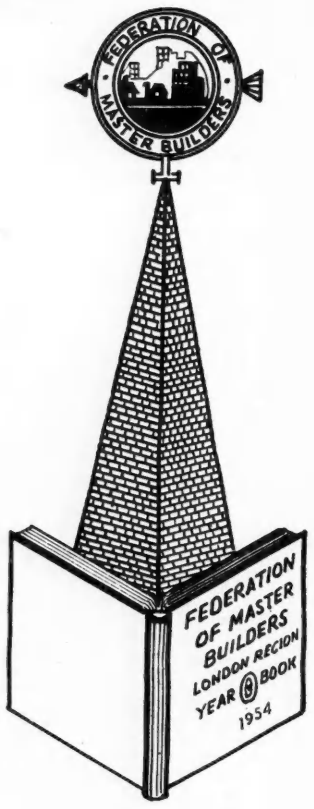
Part 2 of the bulletin of special courses in higher technology issued by the Regional Advisory Council for Higher Technological Education for London and the Home Counties can now be obtained at their offices from the Secretary, Regional Advisory Council, Tavistock House South, Tavistock-square, WC1, price 1s. 6d. It gives the courses available in the spring and summer, 1954.

Films on Building

A comprehensive catalogue of films depicting aspects of building construction has been published by the Scientific Film Association. It includes all films likely to be useful to teachers of building subjects, with a summary of the contents of each film and indications of its suitability for various types of audience. Copies are obtainable from the SFA, 164, Shaftesbury-avenue, WC2, price 2s. 6d.

Council's Housing

Folkestone TC have decided not to develop their Sugar Loaf Hill site, but to proceed with building a limited number of houses by stages. This decision was opposed by Councillor E. W. Chandler, ARIBA, who said that the proposal to build 100 houses was inadequate, as it would only house those who had come on to the waiting list since June. Councillor C. E. Neate said that the Council's decision was justified, and that it would be criminal to embark on a very large housing programme when it was likely, because of changes in the law, that a large proportion of the waiting list would be taken up by empty houses becoming available.



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